Access DB# 83229

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Thor Chea Examiner #: 66978 Date: 12/30/02
Art Unit: 1752 Phone Number 308-3498 Serial Number: 09/831,359
Mail Box and Bldg/Room Location: CP3-9B04 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Silver halide photographic material and method use

Inventors (please provide full names): Tetsuo Nakamura. Takanori Hiki; Katsuhisa Ohzeki. Naoyuki Hanaki

Earliest Priority Filing Date: 03/28/00 136:393179 US 2002005821 6

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

See claim 1 Y_1 = furan, pyrrole ring

Claim 2 see Y_1 - Y_{-26}

Search also spectral sensitizing dye or dye and silver halide or photographic material

Please Do not remove this from file thru 1/11/02

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STAFF USE ONLY

Searcher: EJ
Searcher Phone #:
Searcher Location:
Date Searcher Picked Up:
Date Completed: 12-31-02
Searcher Prep & Review Time: 25
~~Clerical Prep Time:~~
Online Time: 125

Type of Search

NA Sequence (#)
AA Sequence (#)
Structure (#) (8) (subset)
Bibliographic (and)
Litigation
Fulltext
Patent Family
Other

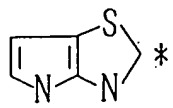
Vendors and cost where applicable

STN $339.28
Dialog
Questel/Orbit
Dr.Link
Lexis/Nexis
Sequence Systems
WWW/Internet
Other (specify)

PTO-1590 (8-01)

other 5- or 6-membered carbocylic or heterocyclic ring, or may have a substituent:

Y-1



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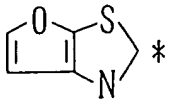

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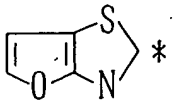

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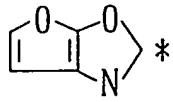

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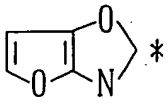

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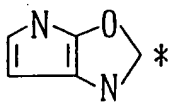

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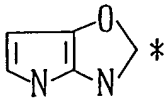

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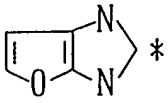

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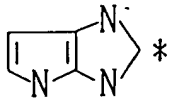

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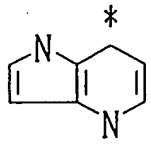

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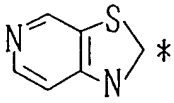

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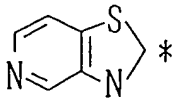

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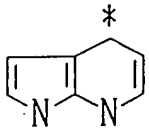

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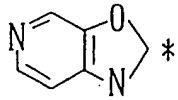

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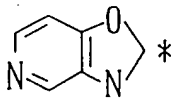

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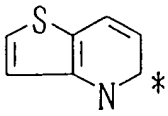

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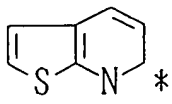

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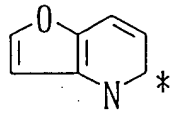

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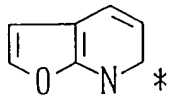

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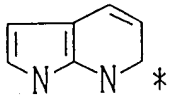

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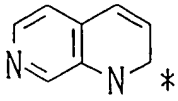

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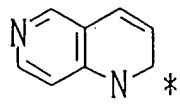

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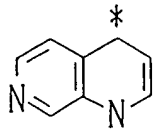

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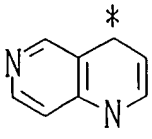
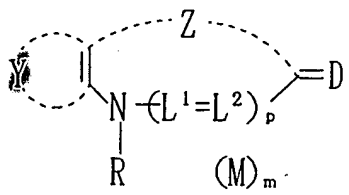


WHAT IS CLAIMED IS:

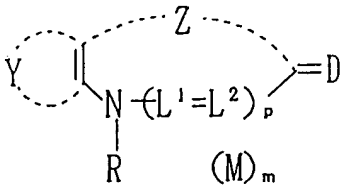
1. A silver halide photographic material which comprises at least one methine dye represented by the following formula (I):



(I)

wherein Y represents a furan ring or a pyrrole ring, and Y may further be condensed with other 5- or 6-membered carbocyclic ring or heterocyclic ring, or may have a substituent; the bond between two carbon atoms in which Y is condensed may be a single bond or a double bond; Z represents an atomic group necessary to form a 5- or 6-membered nitrogen-containing heterocyclic ring, and Z may further be condensed with other 5- or 6-membered carbocyclic ring or heterocyclic ring; R represents a substituted or unsubstituted alkyl group, aryl group, or heterocyclic group; D represents a group necessary to form a methine dye; L^1 and L^2 each represents a methine group; p represents 0 or 1; M represents a counter ion; and m represents a number of 0 or higher necessary to neutralize the charge in the molecule.

2. A silver halide photographic material which comprises at least one methine dye represented by the following formula (I):

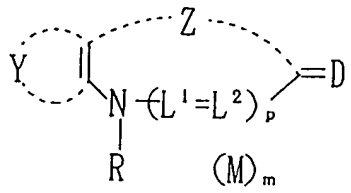


(I)

wherein Y represents an atomic group necessary to form a 5- or 6-membered unsaturated heterocyclic ring, and Y may further be condensed with other 5- or 6-membered carbocyclic ring or heterocyclic ring, or may have a substituent; the bond between two carbon atoms in which Y is condensed may be a single bond or a double bond; Z represents an atomic group necessary to form a 5- or 6-membered nitrogen-containing heterocyclic ring, and Z may further be condensed with other 5- or 6-membered carbocyclic ring or heterocyclic ring; R represents a substituted or unsubstituted alkyl group, aryl group, or heterocyclic group; D represents a group necessary to form a methine dye; L^1 and L^2 each represents a methine group; p represents 0 or 1; M represents a counter ion; and m represents a number of 0 or higher necessary to neutralize the charge in the molecule; wherein the condensed ring containing Y and Z in the methine dye represented by formula (I) is selected from the following Y-1 to Y-26, provided that Y-1 to Y-3 and Y-6 to Y-26 may further be condensed with

in each structural formula, * represents a position to link to a methine chain.

3. A silver halide photographic material which comprises at least one methine dye represented by the following formula (I):



(I)

wherein Y represents a thiophene ring in which at least one halogen atom is substituted, and Y may further be condensed with other 5- or 6-membered carbocyclic ring or heterocyclic ring, or may have a substituent; the bond between two carbon atoms in which Y is condensed may be a single bond or a double bond; Z represents an atomic group necessary to form a 5- or 6-membered nitrogen-containing heterocyclic ring, and Z may further be condensed with other 5- or 6-membered carbocyclic ring or heterocyclic ring; R represents a substituted or unsubstituted alkyl group, aryl group, or heterocyclic group; D represents a group necessary to form a methine dye; L^1 and L^2 each represents a methine group; p represents 0 or 1; M represents a counter ion; and m represents a number of 0 or higher necessary to neutralize the charge in the molecule.

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USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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=> d his


     FILE 'LREGISTRY' ENTERED AT 10:11:36 ON 31 DEC 2002
L1                STR
L2                STR

     FILE 'REGISTRY' ENTERED AT 10:59:55 ON 31 DEC 2002
L3                SCR 1015 AND 1840 AND 2040
L4            0 S (L1 OR L2) AND L3

     FILE 'LREGISTRY' ENTERED AT 11:00:50 ON 31 DEC 2002
L5                STR L1
L6                STR L2

     FILE 'REGISTRY' ENTERED AT 11:06:10 ON 31 DEC 2002
L7            0 S (L5 OR L6) AND L3

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L8                STR

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L9            2 S L8 AND L3

     FILE 'HCAPLUS' ENTERED AT 11:19:58 ON 31 DEC 2002
                  E AN 136:393179
L10          84775 S NAKAMURA ?/AU
L11           1494 S HIOKI ?/AU
L12            440 S OHZEKI ?/AU
L13            681 S HANAKI ?/AU
L14              1 S L10 AND L11 AND L12 AND L13
                  SEL L14 1 RN

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L16               STR L8

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L17               9 S L16 AND L3
L18            1021 S L16 AND L3 FUL
                  SAV L18 CHE309/A

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L19               STR L5
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L20             STR L6

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L22           0 S (L19 OR L20) SSS FUL SUB=L18
L23          30 S L18 AND L15

     FILE 'HCAPLUS' ENTERED AT 12:01:00 ON 31 DEC 2002
L24           3 S L23

     FILE 'LREGISTRY' ENTERED AT 12:02:08 ON 31 DEC 2002
L25             STR L19
L26             STR L20

     FILE 'REGISTRY' ENTERED AT 12:03:39 ON 31 DEC 2002
L27           1 S (L25 OR L26) SSS SAM SUB=L18
L28          29 S (L25 OR L26) SSS FUL SUB=L18
                SAV L28 CHE309A/A

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L30         231 S L18

     FILE 'LCA' ENTERED AT 12:06:26 ON 31 DEC 2002
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L32         113 S (AGX OR AGX2 OR AGF OR AGF2 OR AGCL OR AGCL2 OR AGBR OR
L33         720 S PHOTOG? OR IMAGE# OR IMAGING# OR PHOTOIMAG? OR REPROG?
L34             QUE 74/SC,SX

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L37          61 S L30 AND (L33 OR L34)
L38          36 S L37 AND L36
L39          32 S L38 AND L33 AND L34
L40           9 S L24 OR L29
L41          29 S L39 NOT L40

     FILE 'REGISTRY' ENTERED AT 12:21:48 ON 31 DEC 2002

=> d l28 que stat
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L16             STR

Hy=CH~G1~C          CH=CH
1  2   3  4         @7  @8


REP G1=(0-5) 7-2 8-4
NODE ATTRIBUTES:
NSPEC   IS R      AT   4
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DEFAULT MLEVEL IS ATOM
GGCAT IS PCY LOC HIQ UNS AT 1
DEFAULT ECLEVEL IS LIMITED
ECOUNT IS M1 N AT 1

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE
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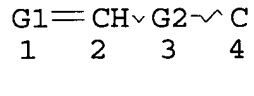
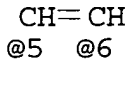
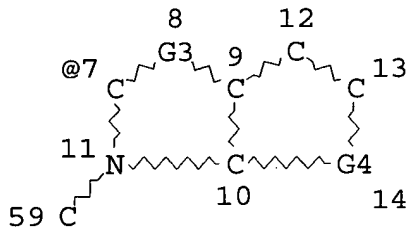
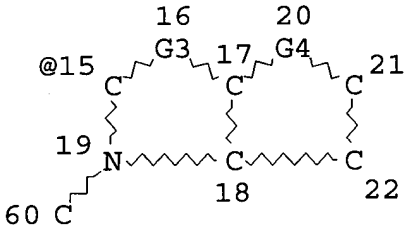
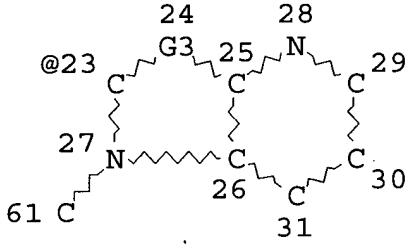
L25 STR

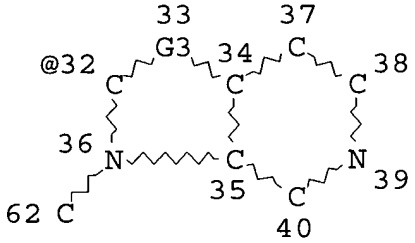


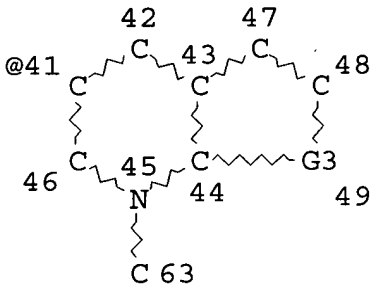


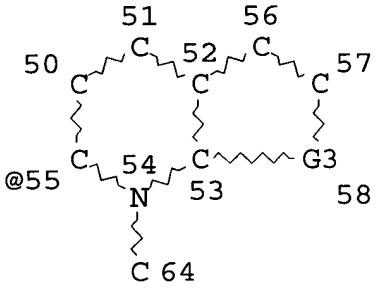












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VAR G3=N/O/S
VAR G4=O/N
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NSPEC IS RC AT 59
NSPEC IS RC AT 60
NSPEC IS RC AT 61

NSPEC IS RC AT 62
NSPEC IS RC AT 63
NSPEC IS RC AT 64
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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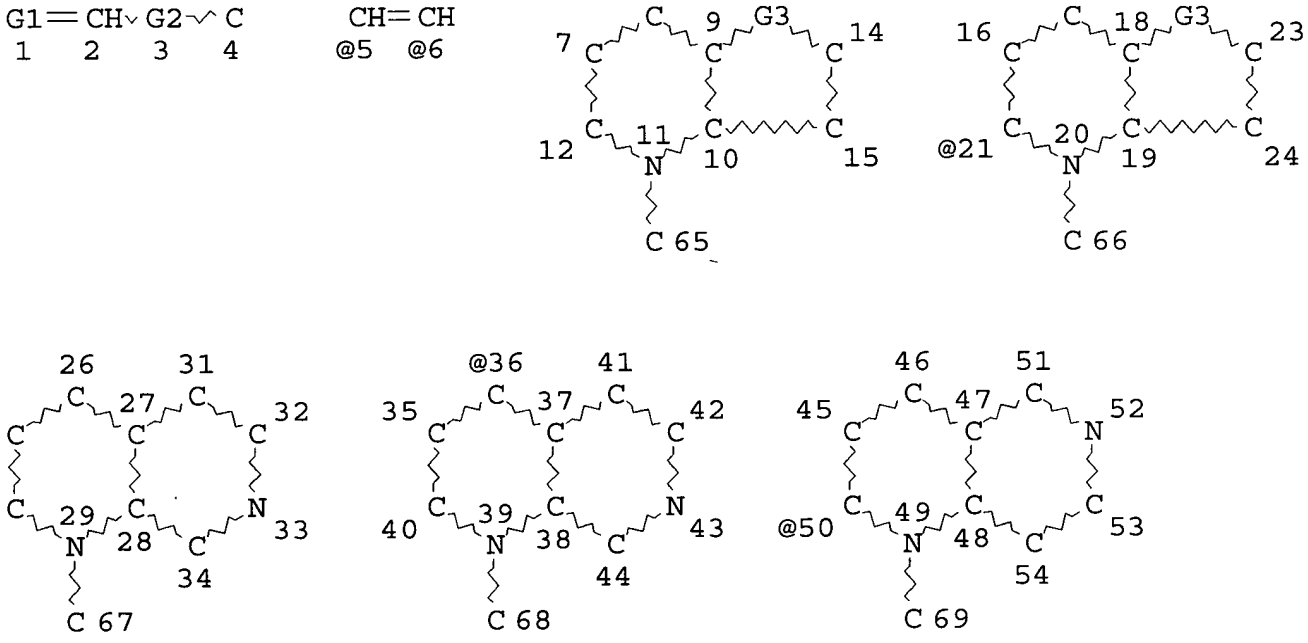
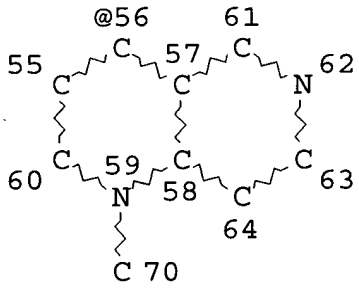
NUMBER OF NODES IS 64

STEREO ATTRIBUTES: NONE
L26 STR



Page 1-A



Page 2-A
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VAR G3=N/O/S
NODE ATTRIBUTES:

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NSPEC   IS RC      AT  65
NSPEC   IS RC      AT  66
NSPEC   IS RC      AT  67
NSPEC   IS RC      AT  68
NSPEC   IS RC      AT  69
NSPEC   IS RC      AT  70
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  70

STEREO ATTRIBUTES: NONE
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SEARCH TIME: 00.00.04


=> file hcaplus
FILE 'HCAPLUS' ENTERED AT 12:22:50 ON 31 DEC 2002
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=> d l40 1-9 cbib abs hitstr hitrn

L40  ANSWER 1 OF 9  HCAPLUS  COPYRIGHT 2002 ACS
2002:607999   Document No. 137:177095  Photopolymerizable composition
     containing organic borate photopolymerization initiator for
     photoimaging recording material.  Takashima, Masanobu; Fukushige,
     Yuichi (Fuji Photo Film Co., Ltd., Japan).  Jpn. Kokai Tokkyo Koho
     JP 2002229196 A2 20020814, 44 pp.  (Japanese).  CODEN: JKXXAF.
     APPLICATION: JP 2001-25900 20010201.
GI
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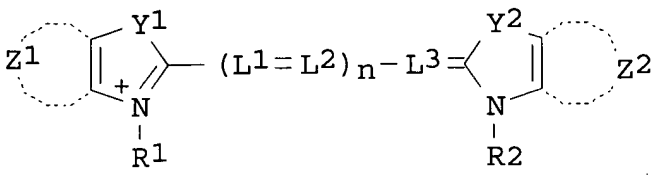

I

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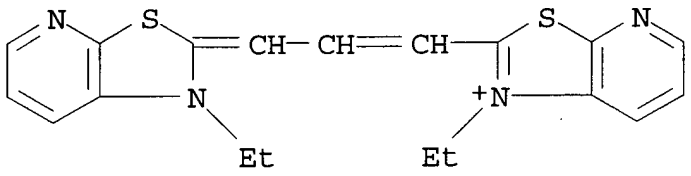
AB   The photopolymerizable compn. comprises a polymerizable compd. I
     (R1,2 = aliph., arom.; Y1,2 = S, O, etc.; Z1 = heterocyclyl, arom.
     ring condensed from heterocyclyl; Z2 = arom., heterocyclyl; L1-3 =
```

methine; n = 0-3; and X- = anion) having an ethylenic unsatd. bond and a radical generator forming a radical upon reacting with the polymerizable compd. The radical generator is an org. borate R11R12R13R14B- G+ (R11-14 = aliph., arom., heterocyclyl; and G+ = anion). The recording material comprises a color-forming component (A) encapsulated in a microcapsule and a color-forming component (B) includes the polymerizable compd. The photopolymerizable compn. showed high sensitivity not only to UV light but also to light ranging from visible to IR.

IT **446233-20-1**
(dye; photopolymerizable compn. contg. dye and org. borate photopolymn. initiator for photoimaging recording material)

RN 446233-20-1 HCAPLUS

CN Thiazolo[5,4-b]pyridinium, 1-ethyl-2-[3-(1-ethylthiazolo[5,4-b]pyridin-2(1H)-ylidene)-1-propenyl]-, iodide (9CI) (CA INDEX NAME)

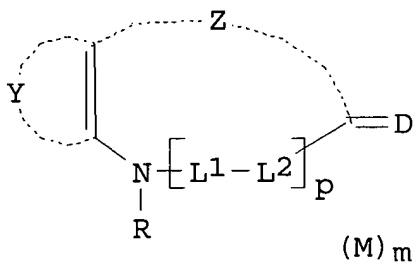


IT **446233-20-1**
(dye; photopolymerizable compn. contg. dye and org. borate photopolymn. initiator for photoimaging recording material)

L40 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2002 ACS

2002:368929 Document No. 136:393179 Silver halide color photographic film and paper comprising sensitizing methine dye. Nakamura, Tetsuo; Hioki, Takanori; Ohzeki, Katsuhisa; Hanaki, Naoyuki (Fuji Photo Film Co., Ltd., Japan). U.S. Pat. Appl. Publ. US 20020058216 A1 20020516, 75 pp., Cont.-in-part of U.S. Ser. No. 536,679. (English). CODEN: USXXCO. APPLICATION: US 2001-931309 20010817. PRIORITY: JP 1999-89424 19990330; JP 2000-4868 20000113; US 2000-536679 20000328; JP 2001-118281 20010417.

GI



(M)m I

AB Disclosed is a silver halide color photog. film and paper which comprise at least one methine dye represented by the following formula I (Y = furan ring, pyrrole ring, Y may be condensed with other 5- or 6-membered carbocyclic or heterocyclic ring; Z = at. group necessary to form a 5- or 6-membered nitrogen-contg. heterocyclic ring, Z may further be condensed with other 5- or 6-membered carbocyclic or heterocyclic ring; R = alkyl, aryl, heterocyclic; D = group necessary to form a methine dye; L1, L2 = methine group; p = 0, 1; M = counter ion; m = no. necessary to neutralize the charge in the mol). High sensitivity and excellent residual color effect can be obtained by the constitution of the present invention.

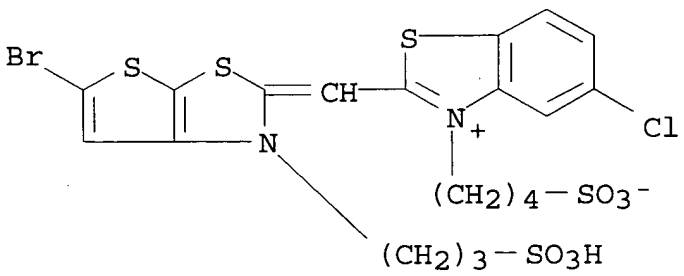
IT **364366-84-7P 391879-86-0P 391880-00-5P 391880-26-5P**
(sensitizing dye; color photog. film and paper comprising sensitizing methine dye)

RN 364366-84-7 HCAPLUS

CN Benzothiazolium, 2-[[5-bromo-1-(3-sulfopropyl)thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-5-chloro-3-(4-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

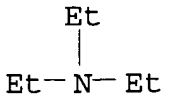
CM 1

CRN 364366-83-6
CMF C20 H20 Br Cl N2 O6 S5

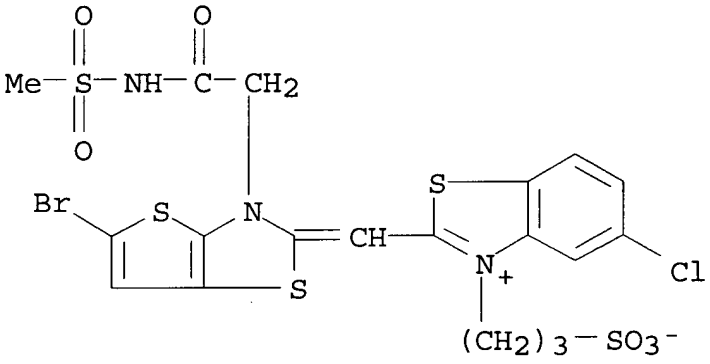


CM 2

CRN 121-44-8
CMF C6 H15 N



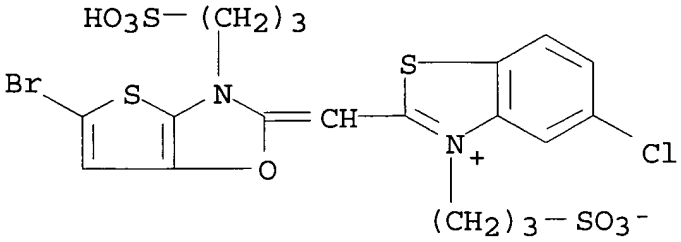
RN 391879-86-0 HCAPLUS
CN Benzothiazolium, 2-[[5-bromo-3-[2-[(methylsulfonyl)amino]-2-oxoethyl]thieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-5-chloro-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 391880-00-5 HCAPLUS
CN Benzothiazolium, 2-[[5-bromo-3-(3-sulfopropyl)thieno[2,3-d]oxazol-2(3H)-ylidene]methyl]-5-chloro-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

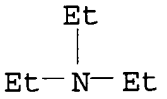
CM 1

CRN 391879-99-5
CMF C19 H18 Br Cl N2 O7 S4



CM 2

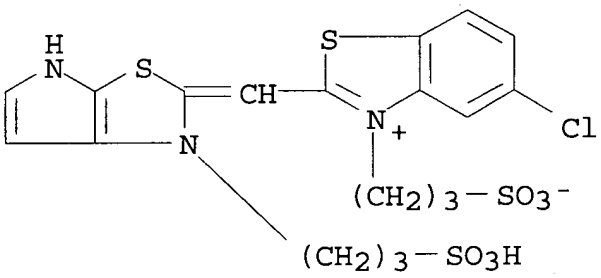
CRN 121-44-8
CMF C6 H15 N



RN 391880-26-5 HCAPLUS
CN Benzothiazolium, 5-chloro-2-[[2,4-dihydro-1-(3-sulfopropyl)-1H-pyrrolo[3,2-d]thiazol-2-ylidene]methyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

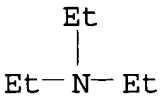
CM 1

CRN 391880-25-4
CMF C19 H20 Cl N3 O6 S4



CM 2

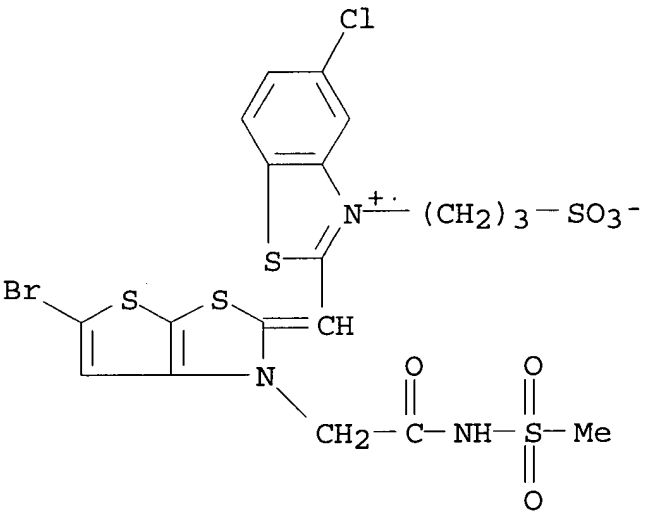
CRN 121-44-8
CMF C6 H15 N



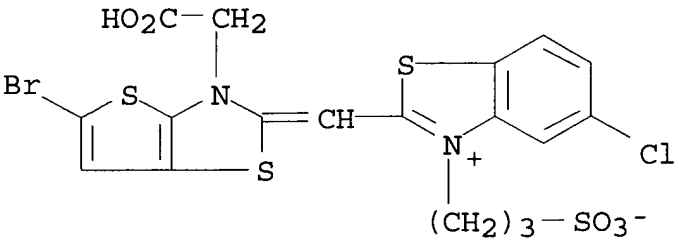
IT **364366-86-9 364366-89-2 364366-91-6**
391879-53-1 391879-56-4 391879-58-6
391879-62-2 391879-63-3 391879-65-5
391879-71-3 391879-78-0 391879-81-5
391879-83-7 391879-84-8 391879-85-9
391880-02-7 391880-03-8 391880-04-9
391880-12-9 391880-18-5 425621-00-7
425621-01-8 425621-03-0 425621-04-1

425621-05-2 425621-06-3
(sensitizing dye; color photog. film and paper comprising sensitizing methine dye)

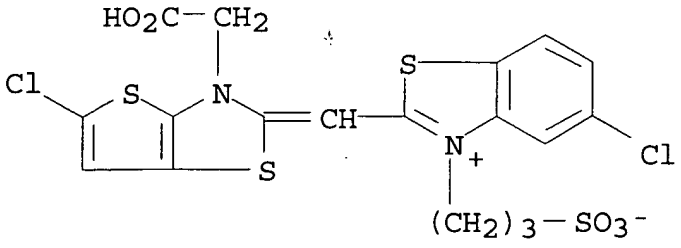
RN 364366-86-9 HCAPLUS
CN Benzothiazolium, 2-[[5-bromo-1-[2-[(methylsulfonyl)amino]-2-oxoethyl]thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-5-chloro-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 364366-89-2 HCAPLUS
CN Benzothiazolium, 2-[[5-bromo-3-(carboxymethyl)thieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-5-chloro-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



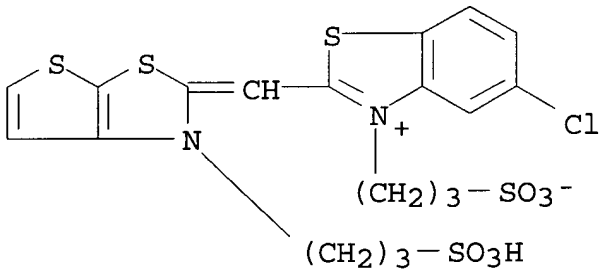
RN 364366-91-6 HCAPLUS
CN Benzothiazolium, 2-[[3-(carboxymethyl)-5-chlorothieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-5-chloro-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 391879-53-1 HCAPLUS
CN Benzothiazolium, 5-chloro-3-(3-sulfopropyl)-2-[[1-(3-sulfopropyl)thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

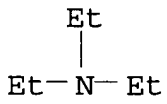
CM 1

CRN 391879-52-0
CMF C19 H19 Cl N2 O6 S5



CM 2

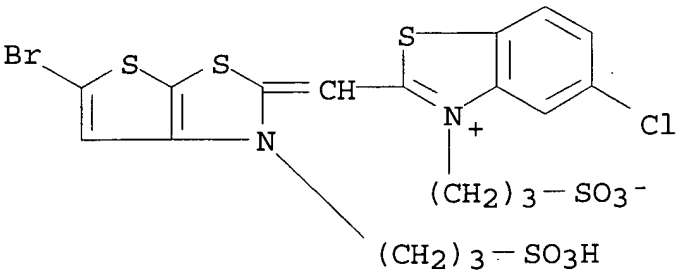
CRN 121-44-8
CMF C6 H15 N



RN 391879-56-4 HCAPLUS
CN Benzothiazolium, 2-[[5-bromo-1-(3-sulfopropyl)thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-5-chloro-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

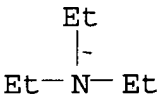
CM 1

CRN 391879-55-3
CMF C19 H18 Br Cl N2 O6 S5

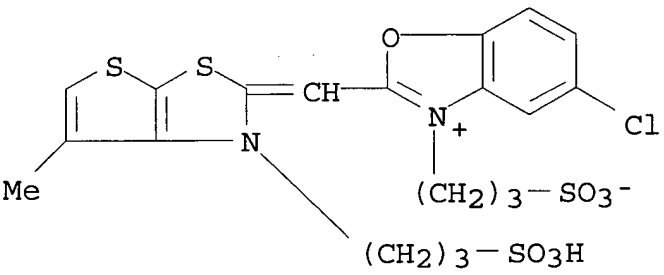


CM 2

CRN 121-44-8
CMF C6 H15 N

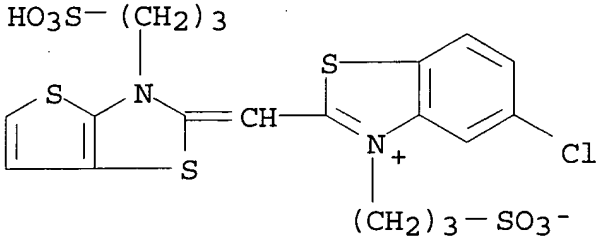


RN 391879-58-6 HCAPLUS
CN Benzoxazolium, 5-chloro-2-[[6-methyl-1-(3-sulfopropyl)thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



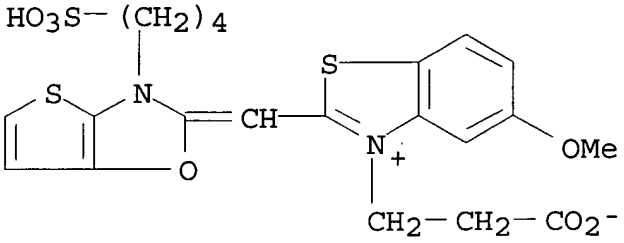
● Na

RN 391879-62-2 HCAPLUS
CN Benzothiazolium, 5-chloro-3-(3-sulfopropyl)-2-[[3-(3-sulfopropyl)thieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)

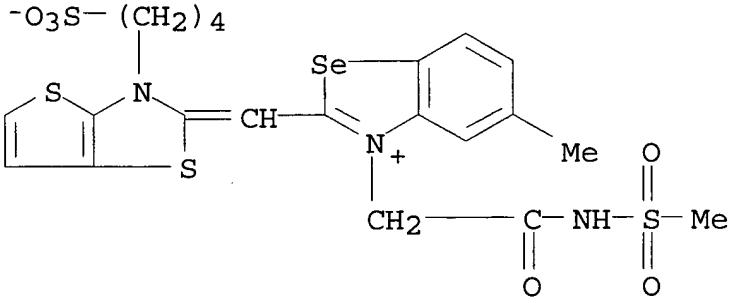


● Na

RN 391879-63-3 HCAPLUS
CN Benzothiazolium, 3-(2-carboxyethyl)-5-methoxy-2-[[3-(4-sulfobutyl)thieno[2,3-d]oxazol-2(3H)-ylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)

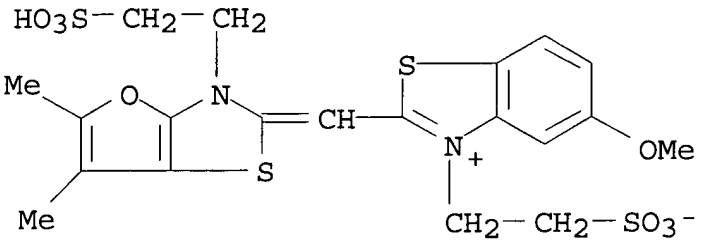


RN 391879-65-5 HCAPLUS
CN Benzoselenazolium, 5-methyl-3-[2-[(methylsulfonyl)amino]-2-oxoethyl]-2-[[3-(4-sulfobutyl)thieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



RN 391879-71-3 HCAPLUS
CN Benzothiazolium, 2-[[5,6-dimethyl-3-(2-sulfoethyl)furo[2,3-d]thiazol-

2(3H)-ylidene]methyl]-5-methoxy-3-(2-sulfoethyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

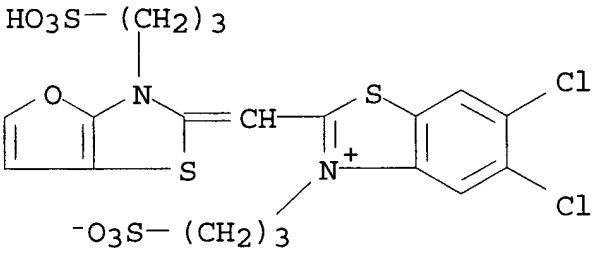


● Na

RN 391879-78-0 HCAPLUS
CN Benzothiazolium, 5,6-dichloro-3-(3-sulfopropyl)-2-[[3-(3-sulfopropyl)furo[2,3-d]thiazol-2(3H)-ylidene]methyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

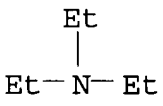
CM 1

CRN 391879-77-9
CMF C19 H18 Cl2 N2 O7 S4



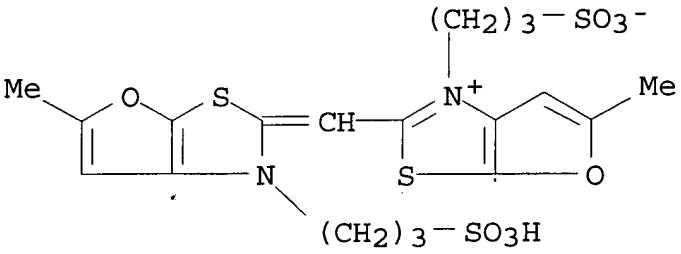
CM 2

CRN 121-44-8
CMF C6 H15 N



RN 391879-81-5 HCAPLUS

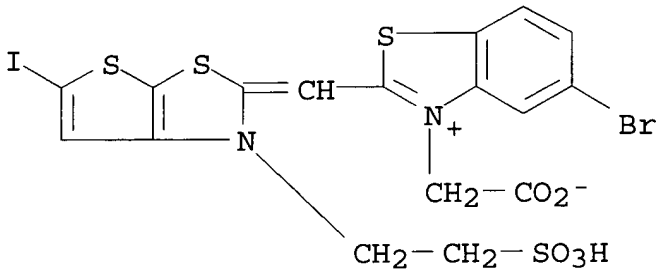
CN Furo[3,2-d]thiazolium, 5-methyl-2-[[5-methyl-1-(3-sulfopropyl)furo[3,2-d]thiazol-2(1H)-ylidene]methyl]-1-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

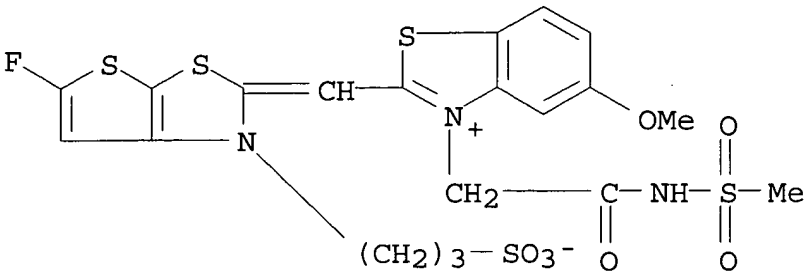
RN 391879-83-7 HCAPLUS

CN Benzothiazolium, 5-bromo-3-(carboxymethyl)-2-[[5-iodo-1-(2-sulfoethyl)thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)

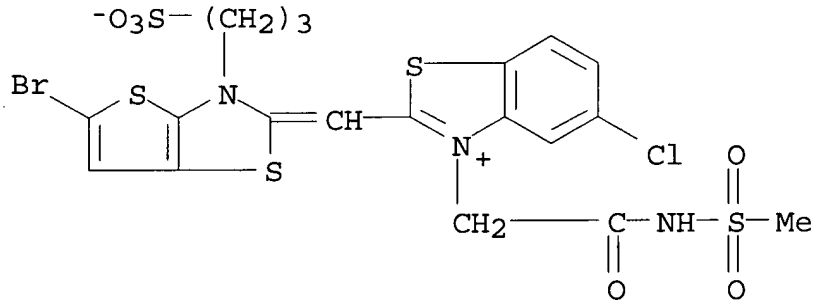


RN 391879-84-8 HCAPLUS

CN Benzothiazolium, 2-[[5-fluoro-1-(3-sulfopropyl)thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-5-methoxy-3-[2-[(methylsulfonyl)amino]-2-oxoethyl]-, inner salt (9CI) (CA INDEX NAME)



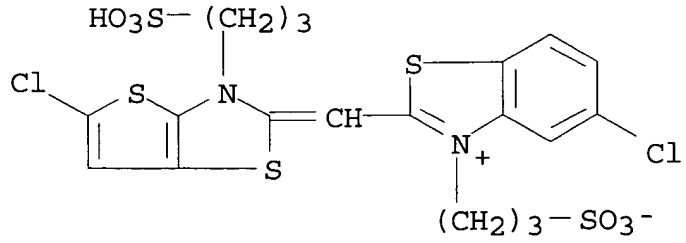
RN 391879-85-9 HCAPLUS
CN Benzothiazolium, 2-[[5-bromo-3-(3-sulfopropyl)thieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-5-chloro-3-[2-[(methylsulfonyl)amino]-2-oxoethyl]-, inner salt (9CI) (CA INDEX NAME)



RN 391880-02-7 HCAPLUS
CN Benzothiazolium, 5-chloro-2-[[5-chloro-3-(3-sulfopropyl)thieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

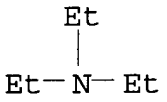
CM 1

CRN 391880-01-6
CMF C19 H18 Cl2 N2 O6 S5

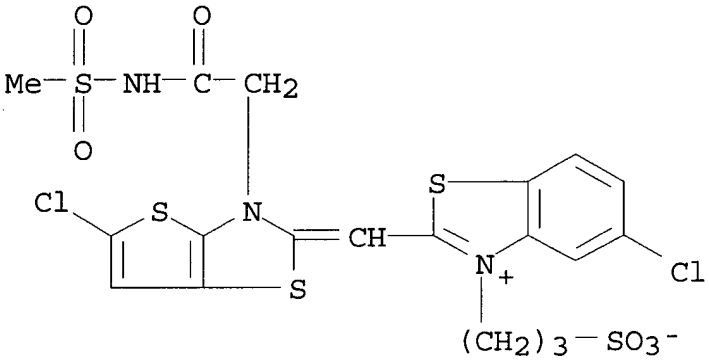


CM 2

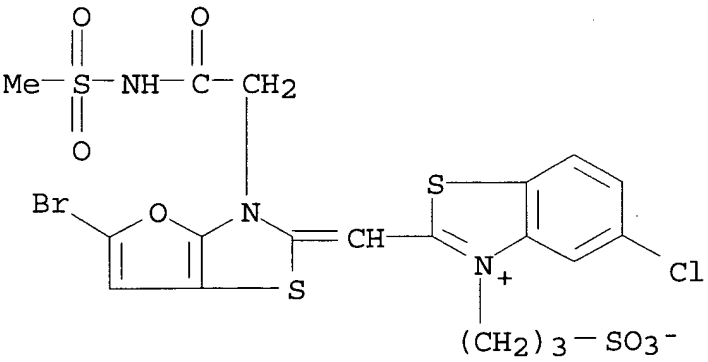
CRN 121-44-8
CMF C6 H15 N



RN 391880-03-8 HCAPLUS
CN Benzothiazolium, 5-chloro-2-[[5-chloro-3-[2-[(methylsulfonyl)amino]-2-oxoethyl]thieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)

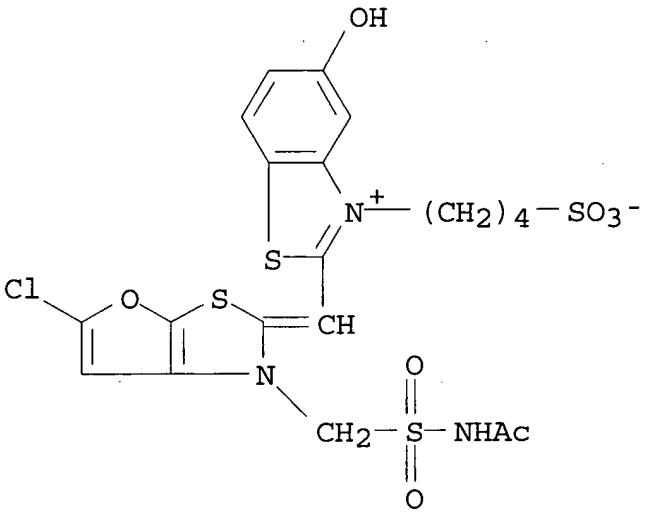


RN 391880-04-9 HCAPLUS
CN Benzothiazolium, 2-[[5-bromo-3-[2-[(methylsulfonyl)amino]-2-oxoethyl]furo[2,3-d]thiazol-2(3H)-ylidene]methyl]-5-chloro-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)

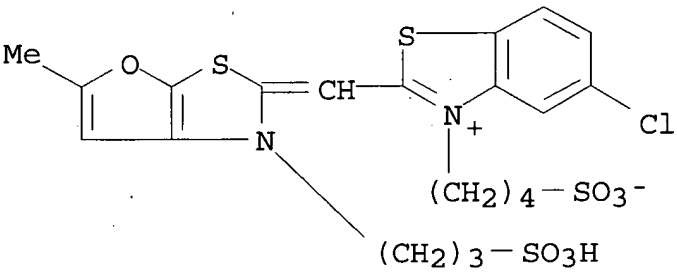


RN 391880-12-9 HCAPLUS
CN Benzothiazolium, 2-[[1-[[(acetylamino)sulfonyl]methyl]-5-chlorofuro[3,2-d]thiazol-2(1H)-ylidene]methyl]-5-hydroxy-3-(4-

sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



RN 391880-18-5 HCAPLUS
CN Benzothiazolium, 5-chloro-2-[[5-methyl-1-(3-sulfopropyl)furo[3,2-d]thiazol-2(1H)-ylidene]methyl]-3-(4-sulfobutyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)

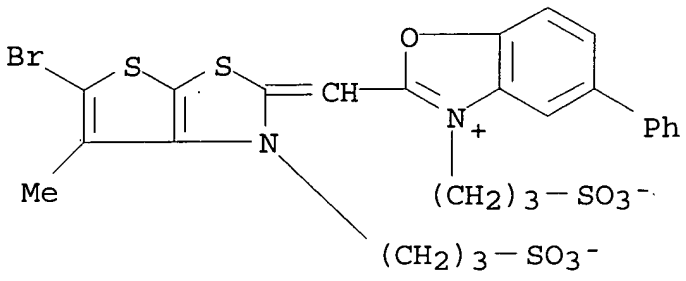


● K

RN 425621-00-7 HCAPLUS
CN Benzoxazolium, 2-[[5-bromo-6-methyl-1-(3-sulfopropyl)thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-5-phenyl-3-(3-sulfopropyl)-, inner salt, ion(1-), 1-ethylpyridinium (9CI) (CA INDEX NAME)

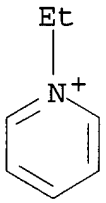
CM 1

CRN 425620-99-1
CMF C26 H24 Br N2 O7 S4

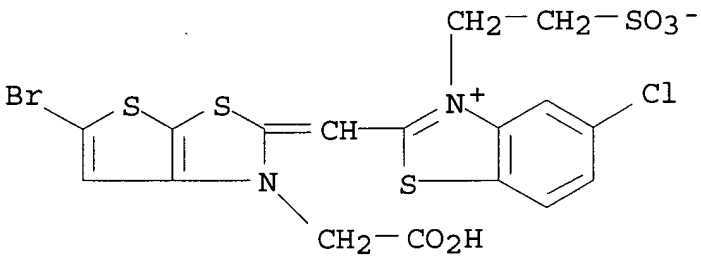


CM 2

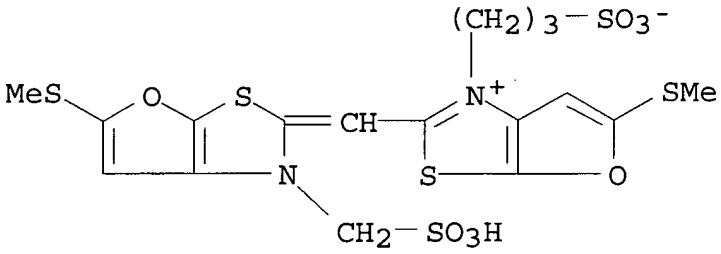
CRN 15302-96-2
CMF C7 H10 N



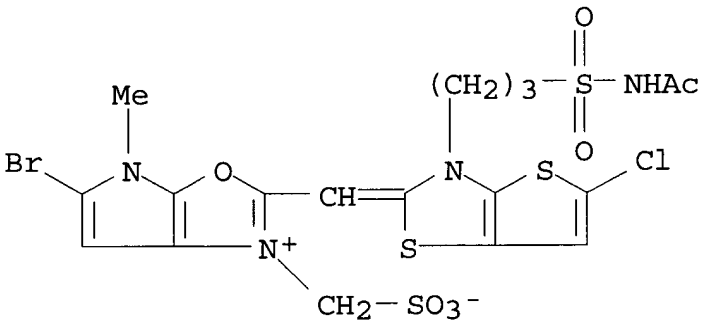
RN 425621-01-8 HCAPLUS
CN Benzothiazolium, 2-[[5-bromo-1-(carboxymethyl)thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-5-chloro-3-(2-sulfoethyl)-, inner salt (9CI) (CA INDEX NAME)



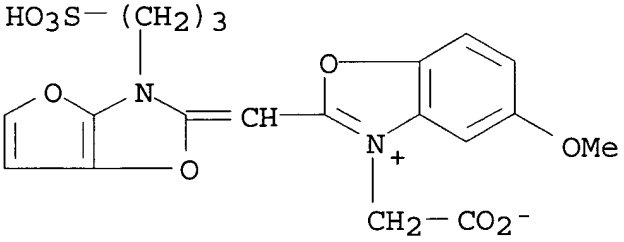
RN 425621-03-0 HCAPLUS
CN Furo[3,2-d]thiazolium, 5-(methylthio)-2-[[5-(methylthio)-1-(sulfomethyl)furo[3,2-d]thiazol-2(1H)-ylidene]methyl]-1-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



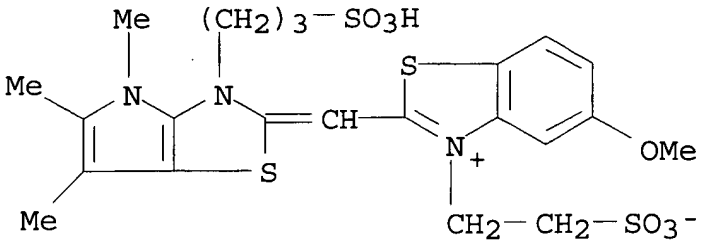
RN 425621-04-1 HCAPLUS
CN 4H-Pyrrolo[3,2-d]oxazolium, 2-[[3-[3-[(acetylamino)sulfonyl]propyl]-5-chlorothieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-5-bromo-4-methyl-1-(sulfomethyl)-, inner salt (9CI) (CA INDEX NAME)



RN 425621-05-2 HCAPLUS
CN Benzoxazolium, 3-(carboxymethyl)-5-methoxy-2-[[3-(3-sulfopropyl)furo[2,3-d]oxazol-2(3H)-ylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



RN 425621-06-3 HCAPLUS
CN Benzothiazolium, 2-[[3,4-dihydro-4,5,6-trimethyl-3-(3-sulfopropyl)-2H-pyrrolo[2,3-d]thiazol-2-ylidene]methyl]-5-methoxy-3-(2-sulfoethyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



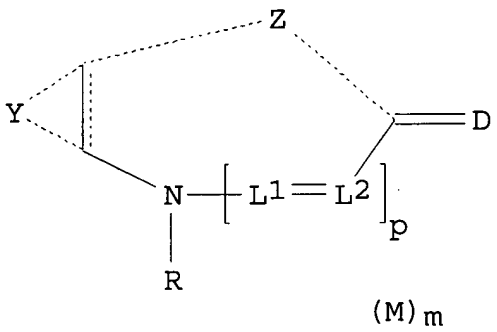
● Na

IT **364366-84-7P 391879-86-0P 391880-00-5P**
391880-26-5P
(sensitizing dye; color photog. film and paper comprising sensitizing methine dye)

IT **364366-86-9 364366-89-2 364366-91-6**
391879-53-1 391879-56-4 391879-58-6
391879-62-2 391879-63-3 391879-65-5
391879-71-3 391879-78-0 391879-81-5
391879-83-7 391879-84-8 391879-85-9
391880-02-7 391880-03-8 391880-04-9
391880-12-9 391880-18-5 425621-00-7
425621-01-8 425621-03-0 425621-04-1
425621-05-2 425621-06-3
(sensitizing dye; color photog. film and paper comprising sensitizing methine dye)

L40 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2002 ACS
2002:61857 Document No. 136:142540 Photographic film containing specific methine dye. Nakamura, Akio; Hioki, Takanori; Ozeki, Katsuhisa; Hanaki, Naoyuki (Fuji Photo Film Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2002023295 A2 20020123, 109 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2001-118281 20010417. PRIORITY: JP 2000-124612 20000425; JP 2000-132357 20000501.

GI



I

AB The invention relates to photog. films contg. methine dye I (Y = 5-6 membered unsat. heterocyclic ring residue; Z = 5-6 membered unsat. heterocyclic ring residue, connecting group; R = alkyl, aryl, heterocyclics; D = dye functional group; L1-2 = methine; p = 0,1; M = counter ion; m = no. to neutralize charge in compd.). The photog. film provides the high sensitivity and little residual color after the process without detracting the pressure durability.

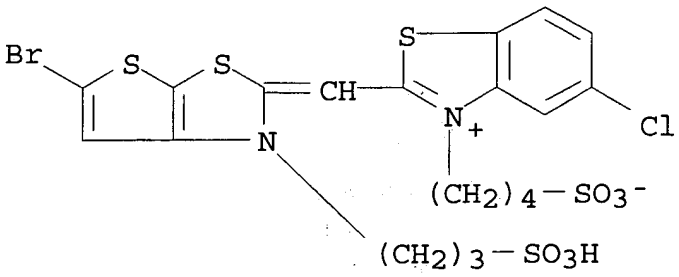
IT **364366-84-7P 364366-86-9P 364366-89-2P**
364366-91-6P 391879-53-1P 391879-56-4P
391879-58-6P 391879-62-2P 391879-63-3P
391879-65-5P 391879-71-3P 391879-78-0P
391879-81-5P 391879-83-7P 391879-84-8P
391879-85-9P 391879-86-0P 391880-00-5P
391880-02-7P 391880-03-8P 391880-04-9P
391880-06-1P 391880-12-9P 391880-16-3P
391880-18-5P 391880-21-0P 391880-26-5P
(photog. film contg. specific methine dye)

RN 364366-84-7 HCAPLUS

CN Benzothiazolium, 2-[[5-bromo-1-(3-sulfopropyl)thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-5-chloro-3-(4-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

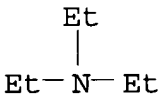
CM 1

CRN 364366-83-6
CMF C20 H20 Br Cl N2 O6 S5

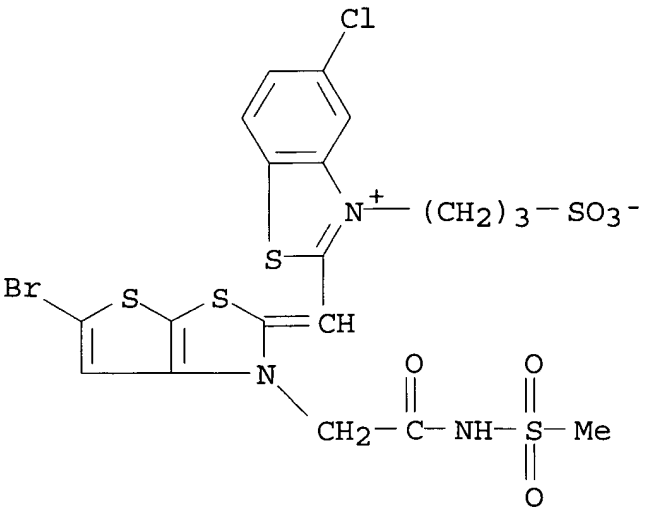


CM 2

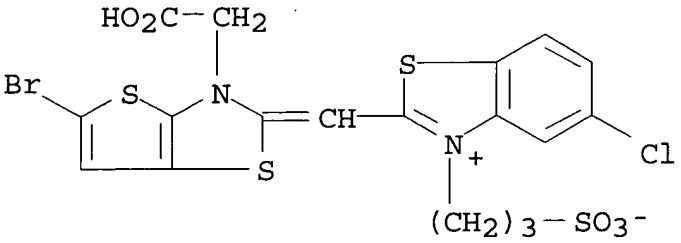
CRN 121-44-8
CMF C6 H15 N



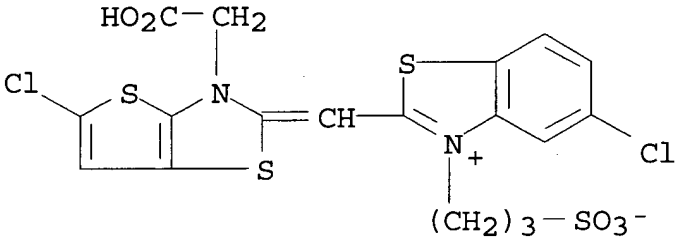
RN 364366-86-9 HCAPLUS
CN Benzothiazolium, 2-[[5-bromo-1-[2-[(methylsulfonyl)amino]-2-oxoethyl]thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-5-chloro-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 364366-89-2 HCAPLUS
CN Benzothiazolium, 2-[[5-bromo-3-(carboxymethyl)thieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-5-chloro-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



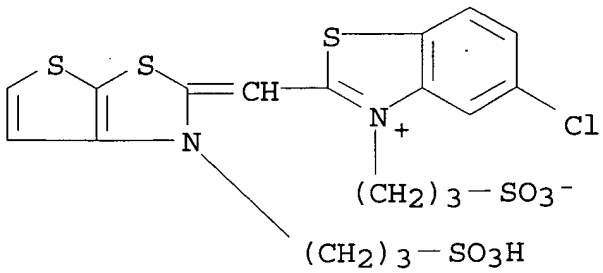
RN 364366-91-6 HCAPLUS
CN Benzothiazolium, 2-[[3-(carboxymethyl)-5-chlorothieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-5-chloro-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 391879-53-1 HCAPLUS
CN Benzothiazolium, 5-chloro-3-(3-sulfopropyl)-2-[[1-(3-sulfopropyl)thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 391879-52-0
CMF C19 H19 Cl N2 O6 S5



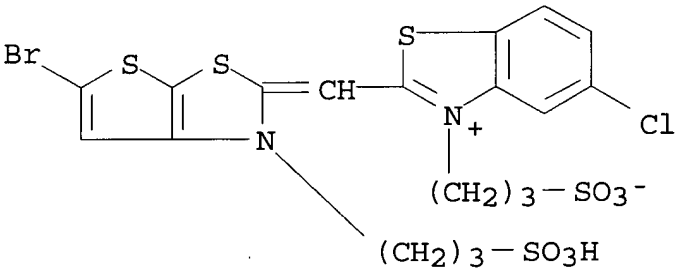
CM 2

CRN 121-44-8
CMF C6 H15 N

RN 391879-56-4 HCAPLUS
CN Benzothiazolium, 2-[[5-bromo-1-(3-sulfopropyl)thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-5-chloro-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

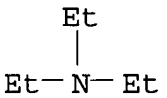
CM 1

CRN 391879-55-3
CMF C19 H18 Br Cl N2 O6 S5

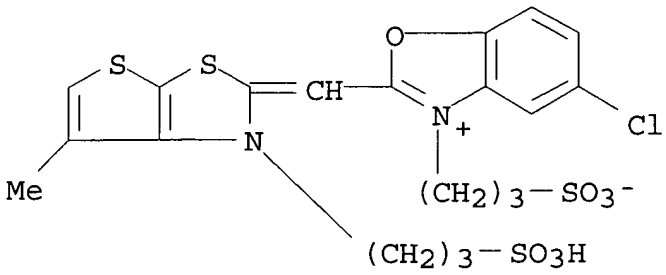


CM 2

CRN 121-44-8
CMF C6 H15 N

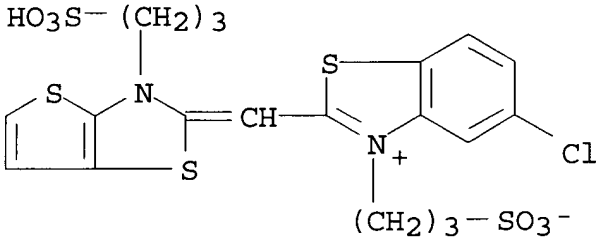


RN 391879-58-6 HCAPLUS
CN Benzoxazolium, 5-chloro-2-[[6-methyl-1-(3-sulfopropyl)thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-3-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



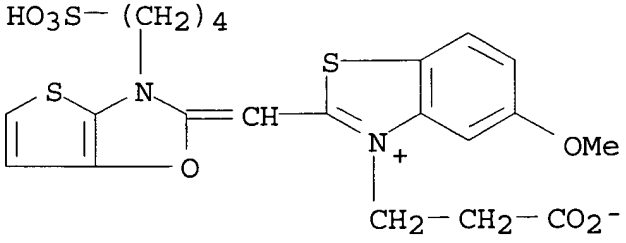
● Na

RN 391879-62-2 HCAPLUS
CN Benzothiazolium, 5-chloro-3-(3-sulfopropyl)-2-[[3-(3-sulfopropyl)thieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)

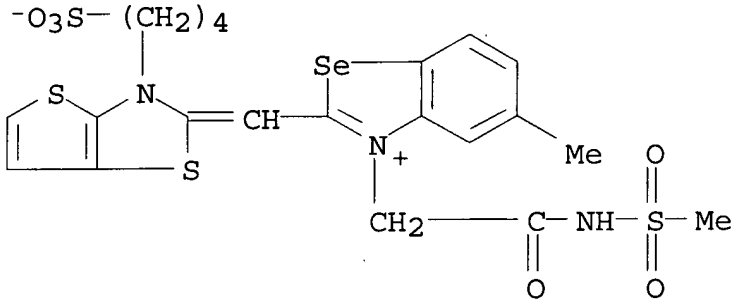


● Na

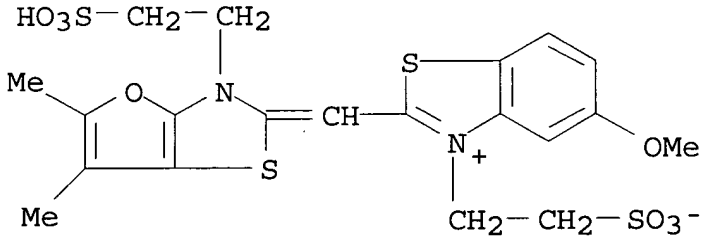
RN 391879-63-3 HCAPLUS
CN Benzothiazolium, 3-(2-carboxyethyl)-5-methoxy-2-[[3-(4-sulfobutyl)thieno[2,3-d]oxazol-2(3H)-ylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



RN 391879-65-5 HCAPLUS
CN Benzoselenazolium, 5-methyl-3-[2-[(methylsulfonyl)amino]-2-oxoethyl]-2-[[3-(4-sulfobutyl)thieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



RN 391879-71-3 HCAPLUS
CN Benzothiazolium, 2-[[5,6-dimethyl-3-(2-sulfoethyl)furo[2,3-d]thiazol-2(3H)-ylidene]methyl]-5-methoxy-3-(2-sulfoethyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

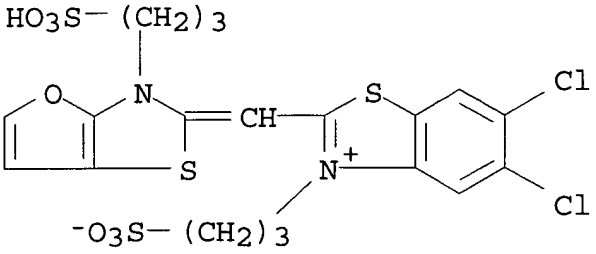


● Na

RN 391879-78-0 HCAPLUS
CN Benzothiazolium, 5,6-dichloro-3-(3-sulfopropyl)-2-[[3-(3-sulfopropyl)furo[2,3-d]thiazol-2(3H)-ylidene]methyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

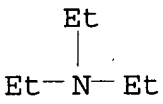
CM 1

CRN 391879-77-9
CMF C19 H18 Cl2 N2 O7 S4

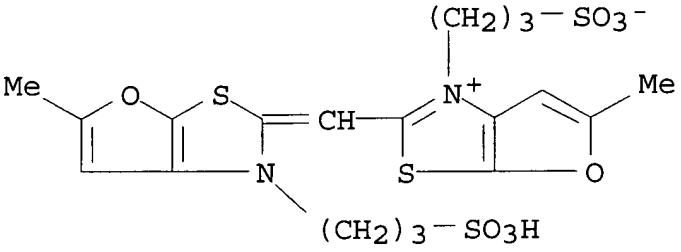


CM 2

CRN 121-44-8
CMF C6 H15 N

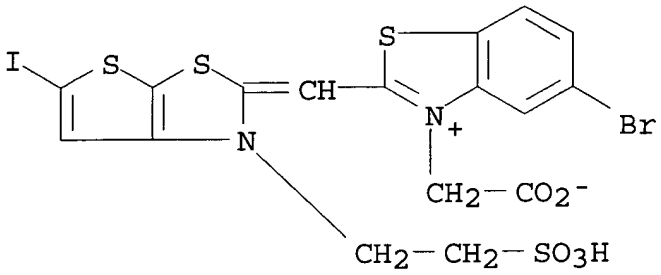


RN 391879-81-5 HCAPLUS
CN Furo[3,2-d]thiazolium, 5-methyl-2-[[5-methyl-1-(3-sulfopropyl)furo[3,2-d]thiazol-2(1H)-ylidene]methyl]-1-(3-sulfopropyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)

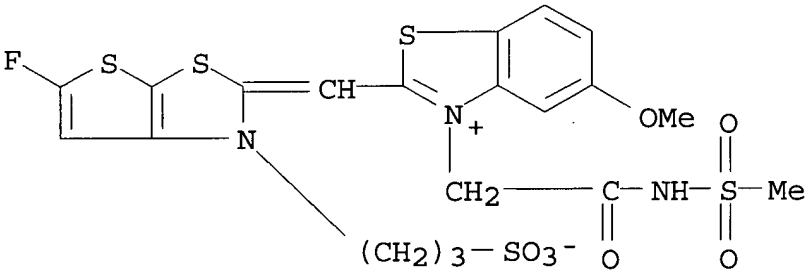


● Na

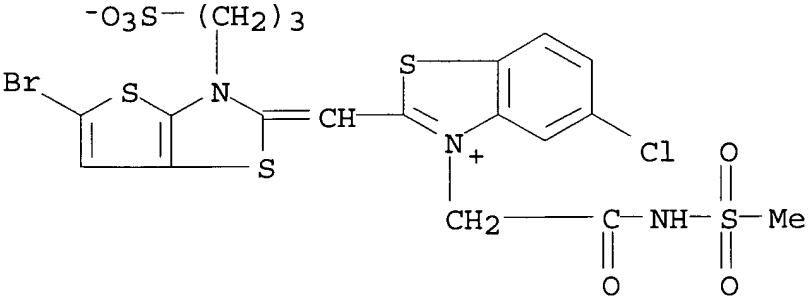
RN 391879-83-7 HCAPLUS
CN Benzothiazolium, 5-bromo-3-(carboxymethyl)-2-[[5-iodo-1-(2-sulfoethyl)thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



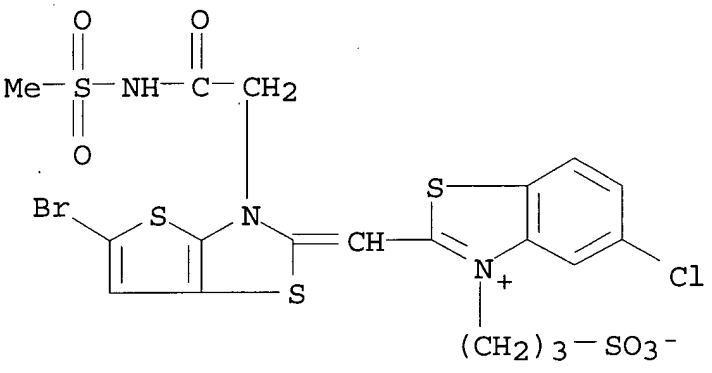
RN 391879-84-8 HCAPLUS
CN Benzothiazolium, 2-[[5-fluoro-1-(3-sulfopropyl)thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-5-methoxy-3-[2-[(methylsulfonyl)amino]-2-oxoethyl]-, inner salt (9CI) (CA INDEX NAME)



RN 391879-85-9 HCAPLUS
CN Benzothiazolium, 2-[[5-bromo-3-(3-sulfopropyl)thieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-5-chloro-3-[2-[(methylsulfonyl)amino]-2-oxoethyl]-, inner salt (9CI) (CA INDEX NAME)



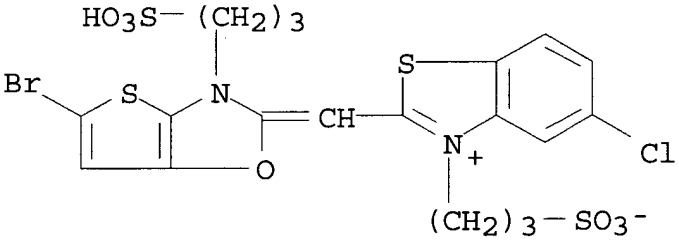
RN 391879-86-0 HCAPLUS
CN Benzothiazolium, 2-[[5-bromo-3-[2-[(methylsulfonyl)amino]-2-oxoethyl]thieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-5-chloro-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 391880-00-5 HCAPLUS
CN Benzothiazolium, 2-[[5-bromo-3-(3-sulfopropyl)thieno[2,3-d]oxazol-2(3H)-ylidene]methyl]-5-chloro-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

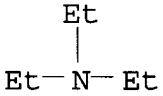
CM 1

CRN 391879-99-5
CMF C19 H18 Br Cl N2 O7 S4



CM 2

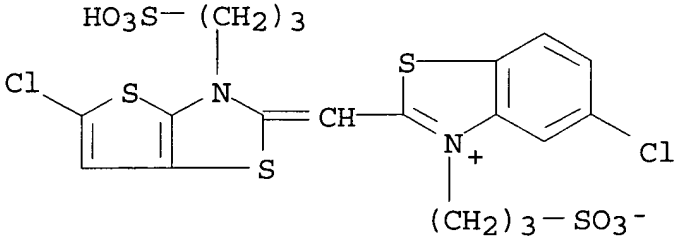
CRN 121-44-8
CMF C6 H15 N



RN 391880-02-7 HCAPLUS
CN Benzothiazolium, 5-chloro-2-[[5-chloro-3-(3-sulfopropyl)thieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

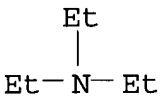
CM 1

CRN 391880-01-6
CMF C19 H18 Cl2 N2 O6 S5

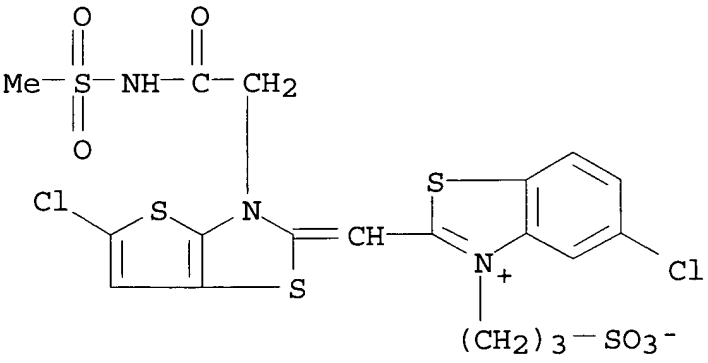


CM 2

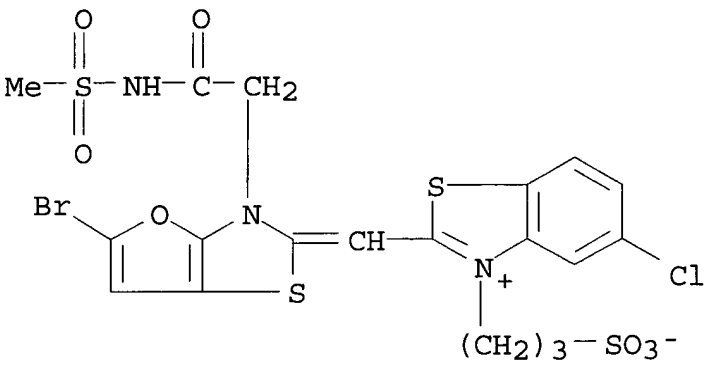
CRN 121-44-8
CMF C6 H15 N



RN 391880-03-8 HCAPLUS
CN Benzothiazolium, 5-chloro-2-[[5-chloro-3-[2-[(methylsulfonyl)amino]-2-oxoethyl]thieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



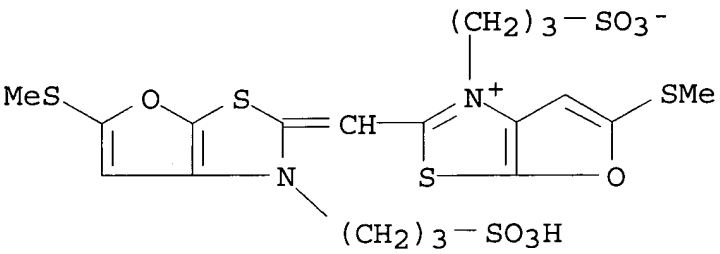
RN 391880-04-9 HCAPLUS
CN Benzothiazolium, 2-[[5-bromo-3-[2-[(methylsulfonyl)amino]-2-oxoethyl]furo[2,3-d]thiazol-2(3H)-ylidene]methyl]-5-chloro-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 391880-06-1 HCAPLUS
CN Furo[3,2-d]thiazolium, 5-(methylthio)-2-[[5-(methylthio)-1-(3-sulfopropyl)furo[3,2-d]thiazol-2(1H)-ylidene]methyl]-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

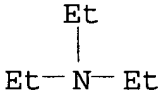
CM 1

CRN 391880-05-0
CMF C19 H22 N2 O8 S6

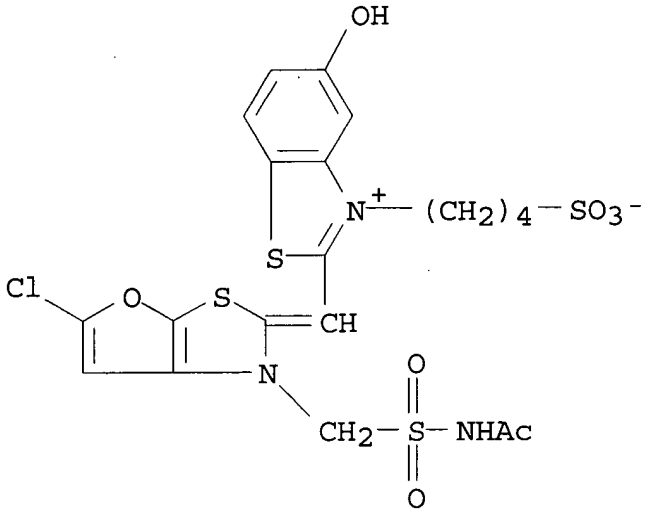


CM 2

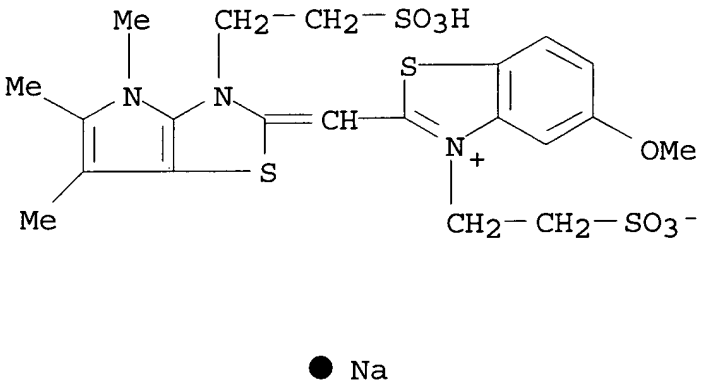
CRN 121-44-8
CMF C6 H15 N



RN 391880-12-9 HCAPLUS
CN Benzothiazolium, 2-[[1-[[(acetylamino)sulfonyl]methyl]-5-chlorofuro[3,2-d]thiazol-2(1H)-ylidene]methyl]-5-hydroxy-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

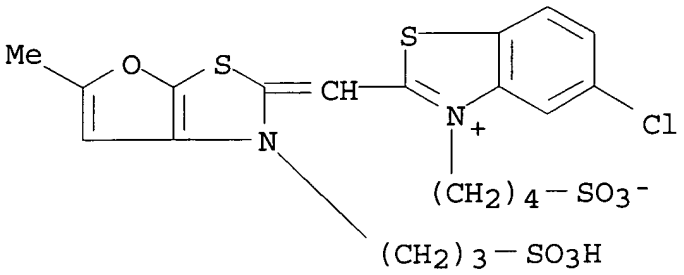


RN 391880-16-3 HCAPLUS
CN Benzothiazolium, 2-[[3,4-dihydro-4,5,6-trimethyl-3-(2-sulfoethyl)-2H-pyrrolo[2,3-d]thiazol-2-ylidene]methyl]-5-methoxy-3-(2-sulfoethyl)-, inner salt, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 391880-18-5 HCAPLUS
CN Benzothiazolium, 5-chloro-2-[[5-methyl-1-(3-sulfopropyl)furo[3,2-d]thiazol-2(1H)-ylidene]methyl]-3-(4-sulfobutyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)

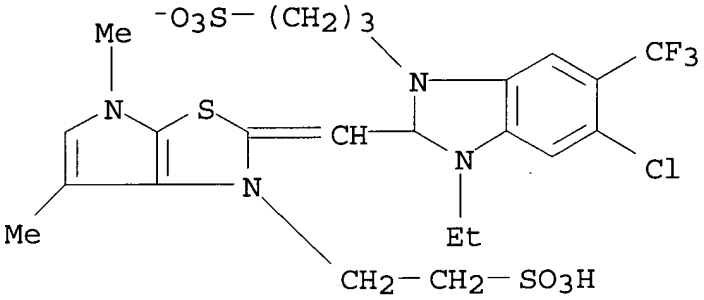


● K

RN 391880-21-0 HCAPLUS
CN 1H-Benzimidazolium, 5-chloro-2-[[1,4-dihydro-4,6-dimethyl-1-(2-sulfoethyl)-2H-pyrrolo[3,2-d]thiazol-2-ylidene]methyl]-3-ethyl-1-(3-sulfopropyl)-6-(trifluoromethyl)-, inner salt, compd. with 2,3,4,5,7,8,9,10-octahydropyrido[1,2-a][1,3]diazepine (1:1) (9CI) (CA INDEX NAME)

CM 1

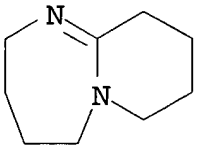
CRN 391880-20-9
CMF C23 H26 Cl F3 N4 O6 S3



*** FRAGMENT DIAGRAM IS INCOMPLETE ***

CM 2

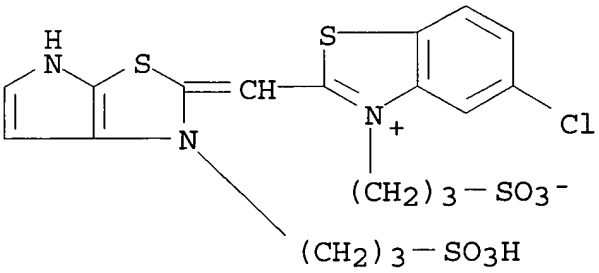
CRN 106872-83-7
CMF C9 H16 N2



RN 391880-26-5 HCAPLUS
CN Benzothiazolium, 5-chloro-2-[[2,4-dihydro-1-(3-sulfopropyl)-1H-pyrrolo[3,2-d]thiazol-2-ylidene]methyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

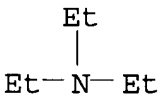
CM 1

CRN 391880-25-4
CMF C19 H20 Cl N3 O6 S4



CM 2

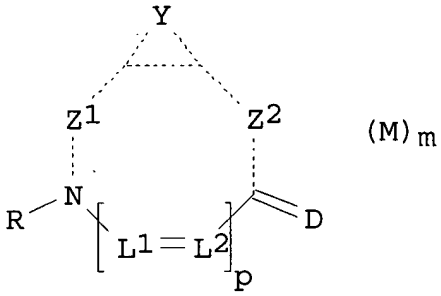
CRN 121-44-8
CMF C6 H15 N



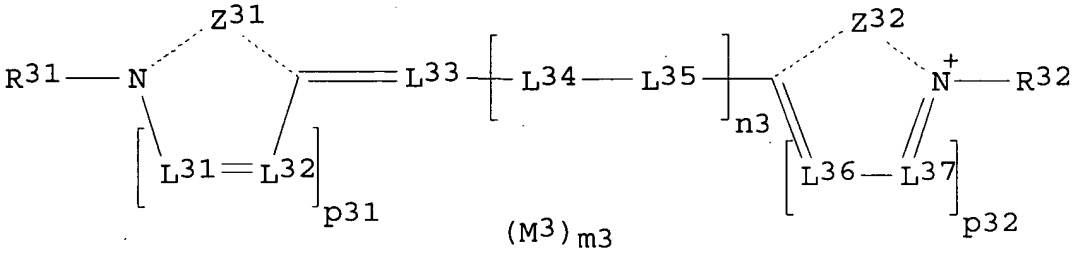
IT **364366-84-7P 364366-86-9P 364366-89-2P**
364366-91-6P 391879-53-1P 391879-56-4P
391879-58-6P 391879-62-2P 391879-63-3P
391879-65-5P 391879-71-3P 391879-78-0P
391879-81-5P 391879-83-7P 391879-84-8P
391879-85-9P 391879-86-0P 391880-00-5P
391880-02-7P 391880-03-8P 391880-04-9P
391880-06-1P 391880-12-9P 391880-16-3P
391880-18-5P 391880-21-0P 391880-26-5P
(photog. film contg. specific methine dye)

L40 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2002 ACS
2001:729885 Document No. 135:296112 Color photographic emulsion with improved solution storage stability and color photographic paper with high sensitivity and image graininess. Ohzeki, Katsuhisa; Nakamura, Tetsuo; Hioki, Takanori (Fuji Photo Film Co., Ltd., Japan). Eur. Pat. Appl. EP 1139164 A1 20011004, 91 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO. (English). CODEN: EPXXDW. APPLICATION: EP 2001-107512 20010326. PRIORITY: JP 2000-86489 20000327; JP 2000-91825 20000329; JP 2000-238642 20000807.

GI



I



II

AB The purpose of the present invention is to provide silver halide photog. materials that are excellent in photog. speed as well as image graininess and exhibit low residual color even after rapid processing. A silver halide photog. material comprises a compd. represented by formula I (Y = group necessary to form heterocyclic ring or a benzene ring; Z1, Z2 = group or a single bond necessary to form a nitrogen-contg. heterocyclic ring; R = alkyl, aryl,

heterocyclic ring; L1, L2 = methine; p = 0-1; M = counter ion; m = 0-1; D = group necessary to form a methine dye), and a compd. represented by formula II (R31, R32 = alkyl, aryl, heterocyclic ring; L31- L37 = methine group; p31, p32 = 0-1; n3 = 0-4; M3 = counter ion; m3 = 0-1; Z31, Z32 = group necessary to form a nitrogen-contg. heterocyclic ring).

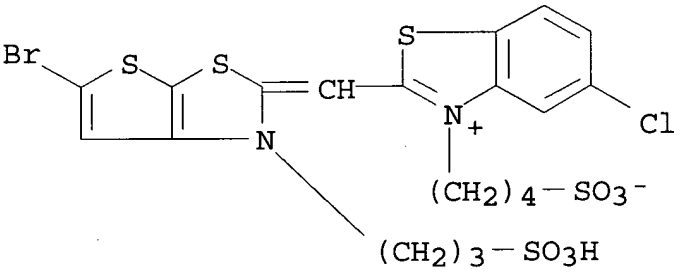
IT **364366-84-7 364366-86-9 364366-89-2 364366-91-6**
(sensitizing dye; color photog. emulsion with improved soln. storage stability and color photog. paper with high sensitivity and image graininess)

RN 364366-84-7 HCAPLUS

CN Benzothiazolium, 2-[[5-bromo-1-(3-sulfopropyl)thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-5-chloro-3-(4-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

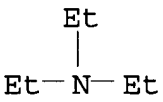
CM 1

CRN 364366-83-6
CMF C20 H20 Br Cl N2 O6 S5



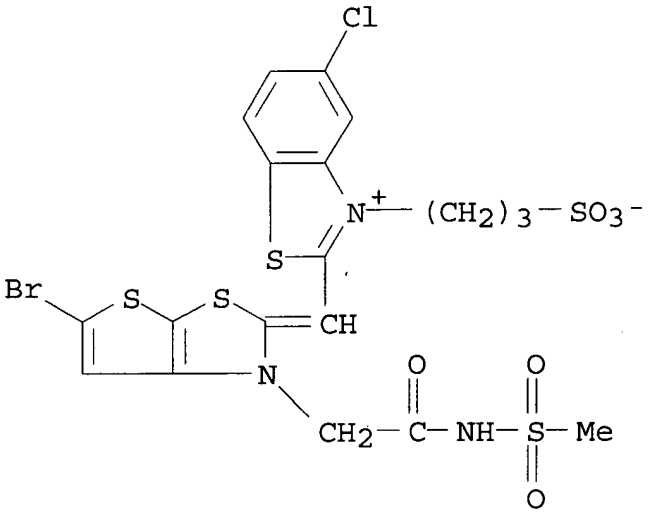
CM 2

CRN 121-44-8
CMF C6 H15 N

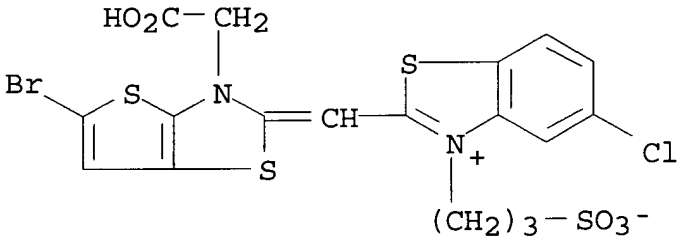


RN 364366-86-9 HCAPLUS

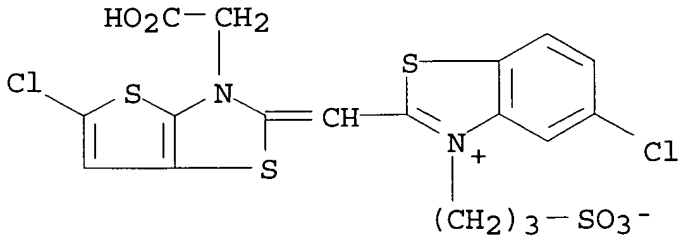
CN Benzothiazolium, 2-[[5-bromo-1-[2-[(methylsulfonyl)amino]-2-oxoethyl]thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-5-chloro-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



RN 364366-89-2 HCAPLUS
CN Benzothiazolium, 2-[[5-bromo-3-(carboxymethyl)thieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-5-chloro-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



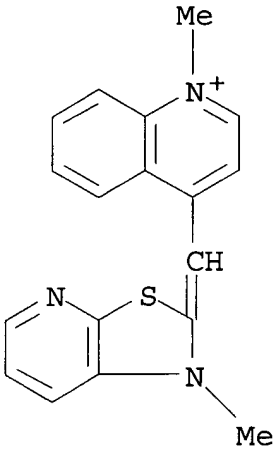
RN 364366-91-6 HCAPLUS
CN Benzothiazolium, 2-[[3-(carboxymethyl)-5-chlorothieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-5-chloro-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



IT **364366-84-7 364366-86-9 364366-89-2**

364366-91-6
(sensitizing dye; color photog. emulsion with improved soln. storage stability and color photog. paper with high sensitivity and image graininess)

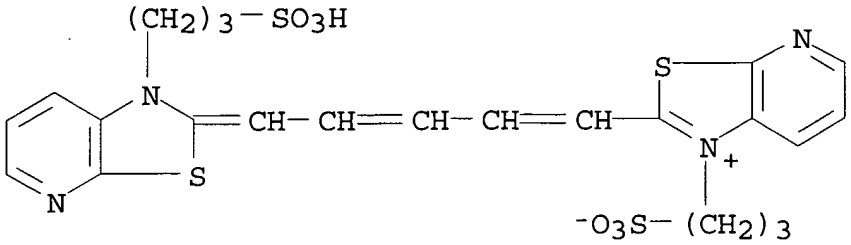
L40 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2002 ACS
2000:790577 Document No. 133:351506 Aza-benzazolium-containing cyanine dyes and their use in fluorescent biological stains. Haugland, Richard P.; Yue, Stephen T. (Molecular Probes, Inc., USA). PCT Int. Appl. WO 2000066664 A1 20001109, 87 pp. DESIGNATED STATES: W: AU, CA, JP; RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE. (English). CODEN: PIXXD2. APPLICATION: WO 2000-US11549 20000426. PRIORITY: US 1999-PV131782 19990430; US 1999-PV158859 19991012.
AB Unsym. cyanine dyes that incorporate an aza-benzazolium ring moiety are disclosed, including cyanine dyes substituted by a cationic side chain, monomeric and dimeric cyanine dyes, chem. reactive cyanine dyes, and conjugates of cyanine dyes. The dyes are virtually non-fluorescent when dild. in aq. soln., but exhibit bright fluorescence when assocd. with nucleic acid polymers such as DNA or RNA, or when assocd. with detergent-complexed proteins. A variety of applications are described for detection and quantitation of nucleic acids and detergent-complexed proteins in a variety of samples, including solns., electrophoretic gels, cells, and microorganisms.
IT **305801-92-7P**
(dye; prodn. of azabenzazolium cyanine dyes for fluorescent biol. stains)
RN 305801-92-7 HCAPLUS
CN Quinolinium, 1-methyl-4-[(1-methylthiazolo[5,4-b]pyridin-2(1H)-ylidene)methyl]-, iodide (9CI) (CA INDEX NAME)



⊕ I^-

IT **305801-92-7P**
(dye; prodn. of azabenzazolium cyanine dyes for fluorescent biol. stains)

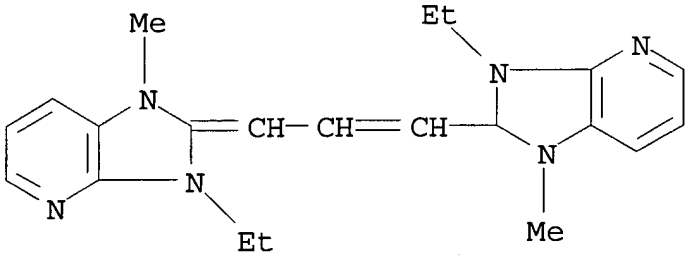
L40 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2002 ACS
1995:410454 Document No. 122:174189 Processing of silver halide photographic material. Tsukada, Kazuya (Konishiroku Photo Ind, Japan). Jpn. Kokai Tokkyo Koho JP 06258786 A2 19940916 Heisei, 45 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1993-48027 19930309.
AB In the processing of a black-and-white silver halide photog. material, such as an x-ray photosensitive material, the photog. material is dyed with a blue dye during any of the steps of development, fixing, and washing.
IT **161486-60-8**
(black-and-white silver halide photog. materials dyed with, during processing)
RN 161486-60-8 HCAPLUS
CN Thiazolo[5,4-b]pyridinium, 1-(3-sulfopropyl)-2-[5-[1-(3-sulfopropyl)thiazolo[5,4-b]pyridin-2(1H)-ylidene]-1,3-pentadienyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)



⊛ Na

IT **161486-60-8**
(black-and-white silver halide photog. materials dyed with, during processing)

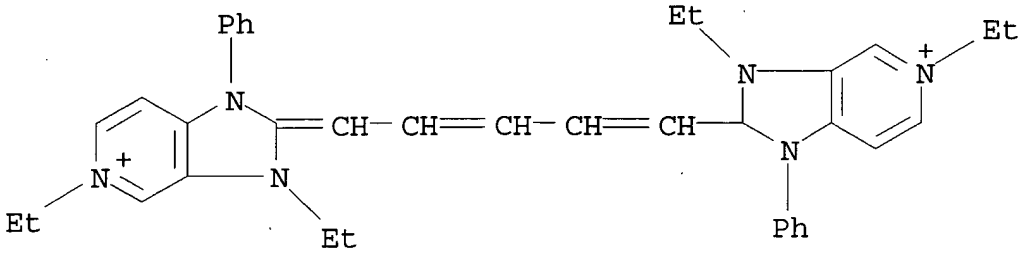
L40 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2002 ACS
1972:407277 Document No. 77:7277 Polymethine dyes, derivatives of imidazopyridine. III. Dyes, derivatives of 1-methyl-1H-imidazo[4,5-b]pyridine. Kazymov, A. V.; Shchelkina, L. P.; Kabirova, N. G.; Vompe, A. F. (Kazan. Nauchno-Issled. Tekhnol. Proekt. Inst. Khim-Fotogr. Prom., Kazan, USSR). Khimiya Geterotsiklicheskikh Soedinenii, 7(11), 1561-5 (Russian) 1971. CODEN: KGSSAQ. ISSN: 0132-6244.
AB Six carbocyanine and 13 merocyanine dyes, e.g., 1-methyl-3,3'-diethyl(2-imidazo[4,5-b]pyridine)thiacarbocyanine iodide [34206-33-2], were prepd. by treating 1,2-dimethyl-3-ethyl- and -3-n-octyl-1H-imidazo[4,5-b]pyridinium p-toluenesulfonate with the appropriately substituted heterocyclics in the presence of piperidine and Et3N. The products were more deeply colored than the corresponding benzimidazole dyes.
IT **36868-60-7P**
(prepn. of)
RN 36868-60-7 HCAPLUS
CN 1H-Imidazo[4,5-b]pyridinium, 3-ethyl-2-[3-(3-ethyl-1,3-dihydro-1-methyl-2H-imidazo[4,5-b]pyridin-2-ylidene)-1-propenyl]-1-methyl-, iodide (9CI) (CA INDEX NAME)



⊛ I^-

*** FRAGMENT DIAGRAM IS INCOMPLETE ***
IT **36868-60-7P**
(prepn. of)

L40 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2002 ACS
1972:114813 Document No. 76:114813 Polymethine dyes, imidazopyridine derivatives. II. Dyes as 1-phenyl-1H-imidazo[4,5-c]pyridine derivatives. Kazymov, A. V.; Shchelkina, L. P. (Kazan. Nauchno-Issled. Tekhnol. Proektn. Inst. Khim.-Fotogr. Prom., Kazan, USSR). Khimiya Geterotsiklicheskikh Soedinenii, 7(5), 693-7 (Russian) 1971. CODEN: KGSSAQ. ISSN: 0132-6244.
AB Carbocyanine, dicarbocyanine, merocyanine, and merocyaninocyanine dyes were prepd. from I by conventional methods. Specific examples are bis(1-phenyl-3,5-diethylimidazo[4,5-c]pyridinium-2,2')trimethinecyanine triperchlorate (II, n = 1, X- = ClO4-) [**34564-42-6**], 1-phenyl-3,3',5-triethyl(imidazo[4,5-c]pyridinium-2)thiacarbocyanine diiodide (III) [34564-43-7], dimethinemerocyanine IV [34564-44-8], dimethinemerocyaninocyanine V [34563-96-7], dimerocyanine VI [34564-45-9], and bis(1-phenyl-3,5-diethylimidazo[4,5-c]pyridinium-2,2')pentamethinecyanine triiodide (II, n = 2, X- = I-) [**34563-97-8**].
IT **34563-97-8P 34564-42-6P**
(prepn. of)
RN 34563-97-8 HCAPLUS
CN 1H-Imidazo[4,5-c]pyridinium, 2-[5-(3,5-diethyl-1-phenyl-1H-imidazo[4,5-c]pyridinium-2(3H)-ylidene)-1,3-pentadienyl]-3,5-diethyl-1-phenyl-, triiodide (9CI) (CA INDEX NAME)

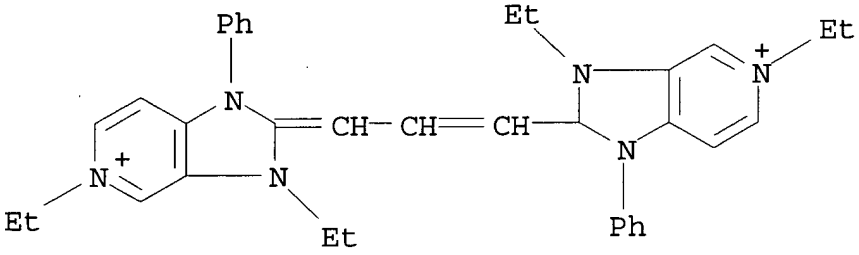


● 3 I^-

*** FRAGMENT DIAGRAM IS INCOMPLETE ***
RN 34564-42-6 HCAPLUS
CN 1H-Imidazo[4,5-c]pyridinium, 2-[3-(3,5-diethyl-1-phenyl-1H-imidazo[4,5-c]pyridinium-2(3H)-ylidene)-1-propenyl]-3,5-diethyl-1-phenyl-, triperchlorate (9CI) (CA INDEX NAME)

CM 1

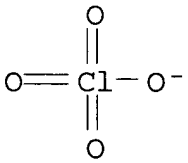
CRN 53367-99-0
CMF C35 H39 N6



*** FRAGMENT DIAGRAM IS INCOMPLETE ***

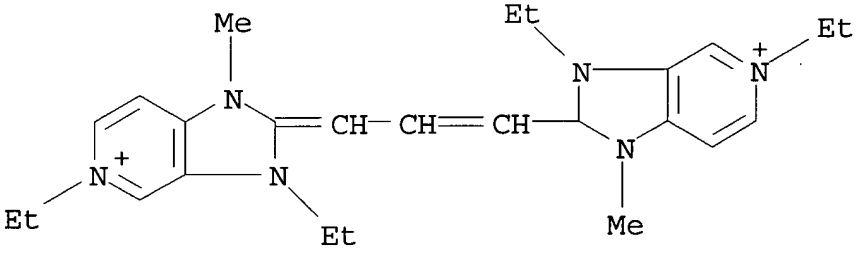
CM 2

CRN 14797-73-0
CMF Cl O4



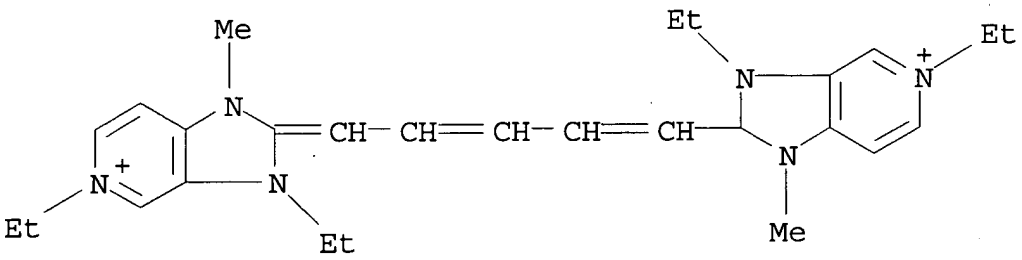
IT **34563-97-8P 34564-42-6P**
(prepn. of)

L40 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2002 ACS
1970:467657 Document No. 73:67657 Polymethine dyes, derivatives of imidazopyridine. I. Dyes derived from 1-methyl-1H-imidazo[4,5-c]pyridine. Kazymov, A. V.; Shchelkina, E. P.; Ivanova, L. V.; Monich, N. V.; Vompe, A. F. (Vses. Gos. Nauch.-Issled. Proekt Inst. Khim.-Fotogr. Prom., Moscow, USSR). Khimiya Geterotsiklicheskikh Soedinenii (2), 228-33 (Russian) 1970. CODEN: KGSSAQ. ISSN: 0132-6244.
GI For diagram(s), see printed CA Issue.
AB I and polymethine dyes of the general formula II were prepd. Heating 3.3 millimoles 1,2-dimethyl-1H - imidazol[4,5-c]pyridine (III) with 9.9 millimoles 4-MeC6H4SO3Et at 120.degree. for 15 hr gave IV (R = Et). Similarly were prepd. IV (R = Me, Pr). A mixt. of 0.35 millimole III and 1 millimole HC(OEt)3 in 2 ml PhNO2 gave I. Condensation of IV with quaternary salts of 2-(.omega.-acetanilinovinyl) or 2-(.beta.-methylthiovinyl) substituted heterocyclic bases in pyridine gave several unsym. carbocyanine dyes (II). The dyes obtained were used as sensitizers for Ag halide emulsions.
IT **28868-36-2P 28868-38-4P**
(prepn. of)
RN 28868-36-2 HCAPLUS
CN 1H-Imidazo[4,5-c]pyridinium, 2-[3-(3,5-diethyl-1,3-dihydro-1-methyl-2H-imidazo[4,5-c]pyridinium-2-ylidene)propenyl]-3,5-diethyl-1-methyl-, triiodide (8CI) (CA INDEX NAME)



◎3 I-

*** FRAGMENT DIAGRAM IS INCOMPLETE ***
RN 28868-38-4 HCAPLUS
CN 1H-Imidazo[4,5-c]pyridinium, 2-[5-(3,5-diethyl-1,3-dihydro-1-methyl-2H-imidazo[4,5-c]pyridinium-2-ylidene)-1,3-pentadienyl]-3,5-diethyl-1-methyl-, triiodide (8CI) (CA INDEX NAME)

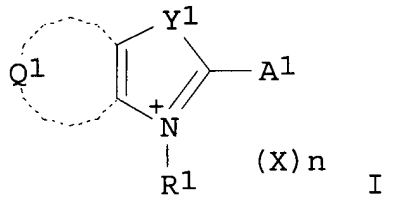


●3 I^-

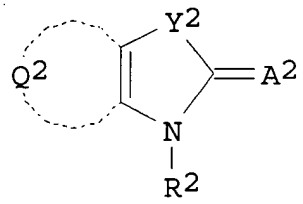
*** FRAGMENT DIAGRAM IS INCOMPLETE ***
IT **28868-36-2P 28868-38-4P**
(prepn. of)

=> d l41 1-29 cbib abs hitstr hitind

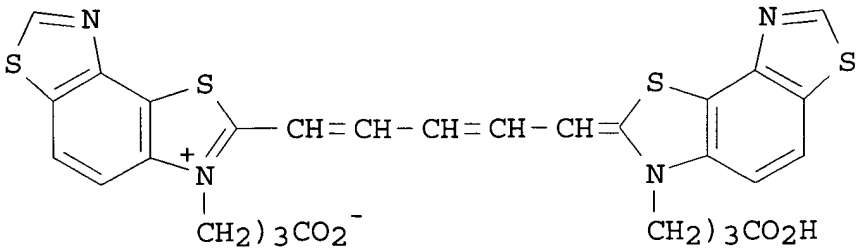
L41 ANSWER 1 OF 29 HCAPLUS COPYRIGHT 2002 ACS
2000:697341 Document No. 133:283013 **Photographic silver halide** materials, **photographic** heat-developable materials and **image** formation process by heat development. Tanaka, Tatsuo; Kita, Noriyasu; Kagawa, Nobuaki (Konica Co., Japan). Jpn. Kokai Tokkyo Koho JP 2000273329 A2 20001003, 59 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1999-75682 19990319.
GI



I



II



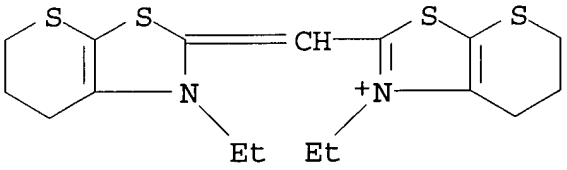
III

AB The title materials, giving good **photog. images**, contain compds. I or II (R1, R2 = aliph. group; A1, A2 = group contg. conjugated bond linkage for formation of methine dye; Y1, Y2 = O, S, Se, N, C; X = ion required to neutralize the charge in the mol.; Q1, Q2 = 5- or 6-membered heterocyclic or fused benzene ring either contg. .gtoreq.1 S atom and methine group or contg. .gtoreq.1 S and N atoms; n = no. required to neutralize the charge in the mol.), and planar **silver halide** particles with aspect ratio .gtoreq.2.0 or normal cryst. **silver halide** particles with av. particle diam. .ltoreq.3.0 .mu.m. Thus, a **photog.** material contg. planar **silver halide** particles (aspect ratio 4.5) and III showed high sensitivity.

IT **299974-55-3P**
(**photog.** dyes for heat-developable **silver halide photog.** materials)

RN 299974-55-3 HCAPLUS

CN 5H-Thiopyrano[3,2-d]thiazolium, 1-ethyl-2-[(1-ethyl-6,7-dihydro-5H-thiopyrano[3,2-d]thiazol-2(1H)-ylidene)methyl]-6,7-dihydro-, iodide (9CI) (CA INDEX NAME)



● I^-

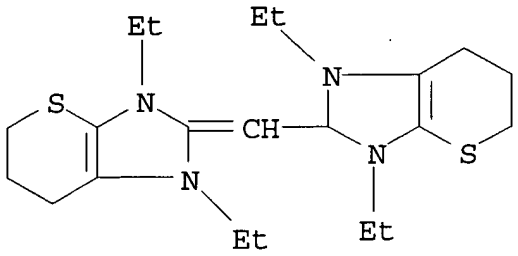
IT **299974-26-8 299974-28-0 299974-33-7**
299974-34-8 299974-44-0 299974-52-0
(**photog.** dyes for heat-developable **silver halide photog.** materials)

RN 299974-26-8 HCAPLUS

CN Thiopyrano[2,3-d]imidazolium, 2-[(1,3-diethyl-3,5,6,7-tetrahydrothiopyrano[2,3-d]imidazol-2(1H)-ylidene)methyl]-1,3-diethyl-3,5,6,7-tetrahydro-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

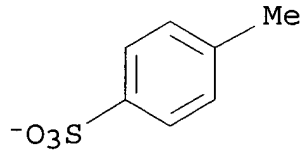
CRN 299974-25-7
CMF C21 H33 N4 S2



*** FRAGMENT DIAGRAM IS INCOMPLETE ***

CM 2

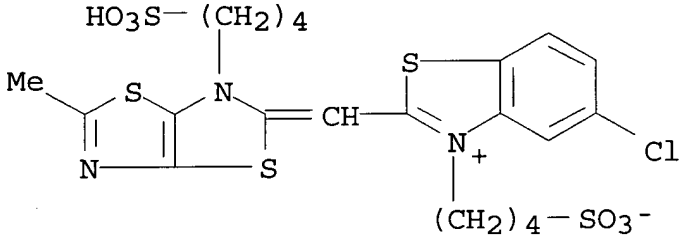
CRN 16722-51-3
CMF C7 H7 O3 S



RN 299974-28-0 HCAPLUS
CN Benzothiazolium, 5-chloro-2-[[5-methyl-3-(4-sulfobutyl)thiazolo[5,4-d]thiazol-2(3H)-ylidene]methyl]-3-(4-sulfobutyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

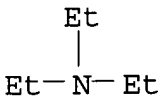
CM 1

CRN 299974-27-9
CMF C21 H24 Cl N3 O6 S5

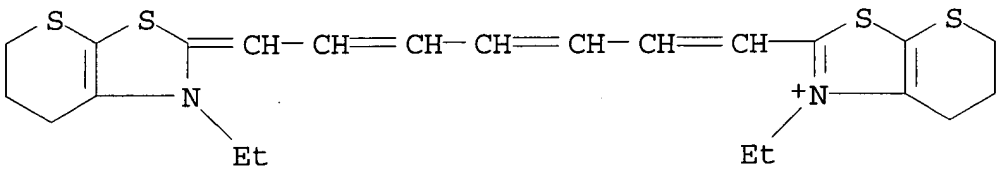


CM 2

CRN 121-44-8
CMF C6 H15 N

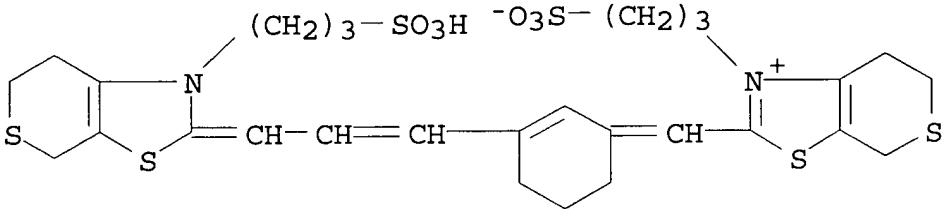


RN 299974-33-7 HCAPLUS
CN 5H-Thiopyrano[3,2-d]thiazolium, 1-ethyl-2-[7-(1-ethyl-6,7-dihydro-5H-thiopyrano[3,2-d]thiazol-2(1H)-ylidene)-1,3,5-heptatrienyl]-6,7-dihydro-, iodide (9CI) (CA INDEX NAME)



● I^-

RN 299974-34-8 HCAPLUS
CN 4H-Thiopyrano[4,3-d]thiazolium, 6,7-dihydro-1-(3-sulfopropyl)-2-[[3-[3-[1,4,6,7-tetrahydro-1-(3-sulfopropyl)-2H-thiopyrano[4,3-d]thiazol-2-ylidene]-1-propenyl]-2-cyclohexen-1-ylidene]methyl]-, inner salt, potassium salt (9CI) (CA INDEX NAME)

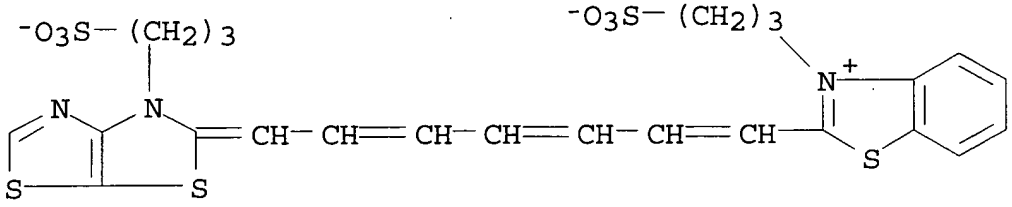


● K

RN 299974-44-0 HCAPLUS
CN Benzothiazolium, 3-(3-sulfopropyl)-2-[7-[3-(3-sulfopropyl)thiazolo[5,4-d]thiazol-2(3H)-ylidene]-1,3,5-heptatrienyl]-, inner salt, ion(1-), N,N,N-triethylethanaminium (9CI) (CA INDEX NAME)

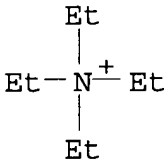
CM 1

CRN 299974-43-9
CMF C24 H24 N3 O6 S5



CM 2

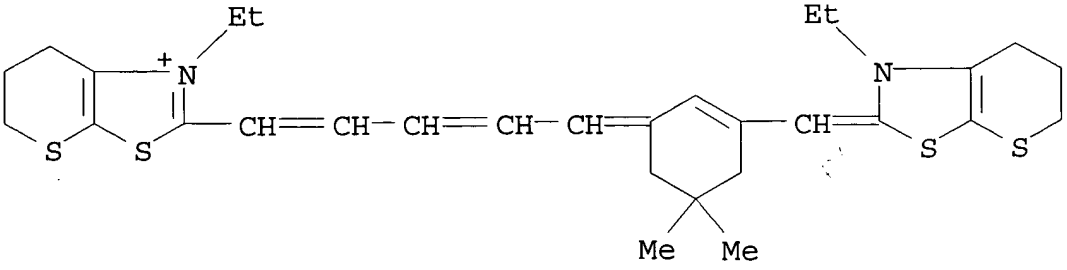
CRN 66-40-0
CMF C8 H20 N



RN 299974-52-0 HCAPLUS
CN 5H-Thiopyrano[3,2-d]thiazolium, 1-ethyl-2-[5-[3-[(1-ethyl-6,7-dihydro-5H-thiopyrano[3,2-d]thiazol-2(1H)-ylidene)methyl]-5,5-dimethyl-2-cyclohexen-1-ylidene]-1,3-pentadienyl]-6,7-dihydro-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

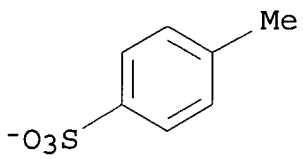
CM 1

CRN 299974-51-9
CMF C30 H39 N2 S4



CM 2

CRN 16722-51-3
CMF C7 H7 O3 S



IC ICM C09B023-00
ICS G03C001-035; G03C001-14; G03C001-498
CC 41-11 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 28, **74**
ST **photog** dye heat developable film; methine dye sensitizer **photog** material; **silver halide** emulsion **photog** dye; laser **photog** heat developable film
IT Particle size
(of **silver halides**; **photog**. dyes for heat-developable **silver halide photog**. materials)
IT Cyanine dyes
Photographic emulsions
Photographic films
Photographic sensitizers
Photothermographic copying
(**photog**. dyes for heat-developable **silver halide photog**. materials)
IT 299974-39-3P 299974-47-3P
(**photog**. dyes for heat-developable **silver halide photog**. materials)
IT **299974-55-3P**
(**photog**. dyes for heat-developable **silver halide photog**. materials)
IT **299974-26-8** **299974-28-0** 299974-29-1
299974-30-4 299974-31-5 299974-32-6 **299974-33-7**
299974-34-8 299974-36-0 299974-37-1 299974-40-6
299974-42-8 **299974-44-0** 299974-45-1 299974-49-5
299974-50-8 **299974-52-0** 299974-53-1 299974-57-5
299974-58-6
(**photog**. dyes for heat-developable **silver halide photog**. materials)
IT 1614-82-0 24072-85-3 77770-28-6 114617-00-4 299974-54-2
299974-56-4
(**photog**. dyes for heat-developable **silver halide photog**. materials)

L41 ANSWER 2 OF 29 HCAPLUS COPYRIGHT 2002 ACS

2000:139307 Document No. 132:201003 New **photographic** sensitizing dye and **silver halide** emulsion containing the same for **photographic** material, heat-developable **photographic** material, and optical recording medium. Tanaka, Tatsuo; Kita, Noriyasu; Fukusaka, Kiyoshi; Kagawa, Nobuaki (Konica Co., Japan). Jpn. Kokai Tokkyo Koho JP 2000063690 A2 20000229, 87 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1998-235688 19980821.

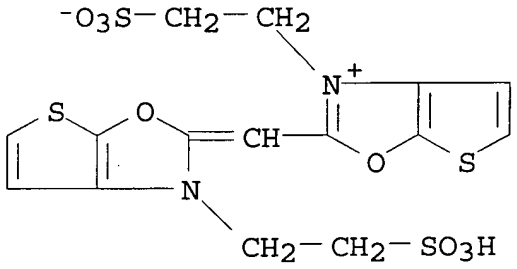
GI For diagram(s), see printed CA Issue.

AB The **photog.** **Ag halide** emulsion contains new **photog.** sensitizing dye represented by I or II (R1, R2 = aliph. group; Q = nonmetal atoms for forming 5- to 6-membered heterocycles; A1, A2 = atoms for forming methine dye; Y1, Y2 = O, S, Se, N, C; X = counter ion; n = no.) and specific tabular **Ag halide** grains. The **photog.** material shows excellent **photog.** properties.

IT **259815-09-3 259815-10-6 259815-11-7 259815-13-9 259815-18-4 259815-19-5 259815-22-0 259815-28-6 259815-34-4 259815-35-5 259815-36-6 259815-39-9 259815-52-6**
(new **photog.** sensitizing dye in **silver halide** emulsion for **photog.** material)

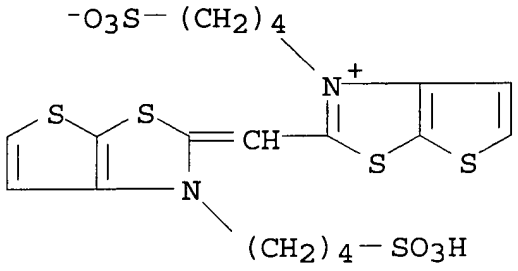
RN 259815-09-3 HCAPLUS

CN Thieno[3,2-d]oxazolium, 1-(2-sulfoethyl)-2-[[1-(2-sulfoethyl)thieno[3,2-d]oxazol-2(1H)-ylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)

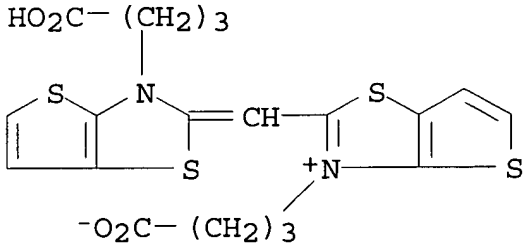


RN 259815-10-6 HCAPLUS

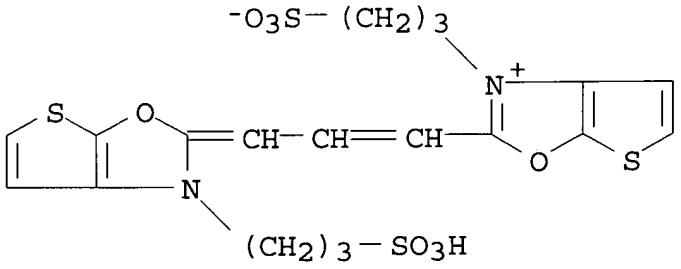
CN Thieno[3,2-d]thiazolium, 1-(4-sulfobutyl)-2-[[1-(4-sulfobutyl)thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



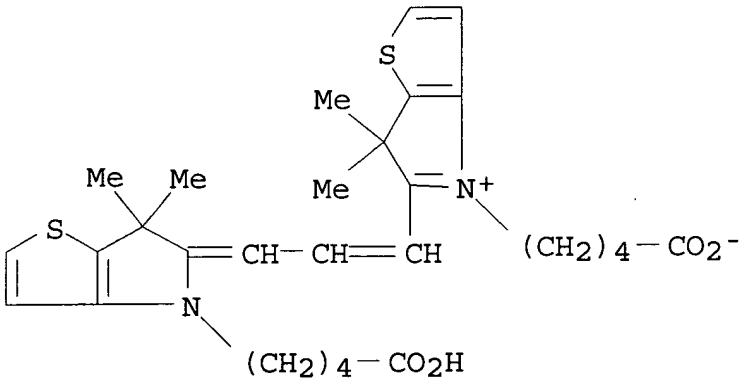
RN 259815-11-7 HCAPLUS
CN Thieno[2,3-d]thiazolium, 3-(3-carboxypropyl)-2-[[3-(3-carboxypropyl)thieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



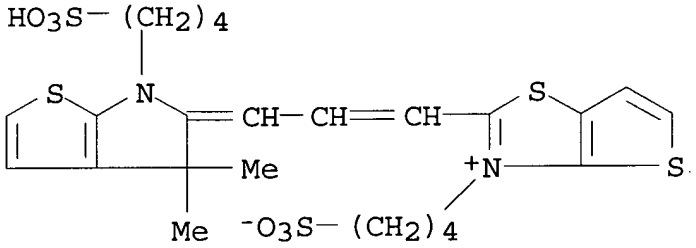
RN 259815-13-9 HCAPLUS
CN Thieno[3,2-d]oxazolium, 1-(3-sulfopropyl)-2-[3-[1-(3-sulfopropyl)thieno[3,2-d]oxazol-2(1H)-ylidene]-1-propenyl]-, inner salt (9CI) (CA INDEX NAME)



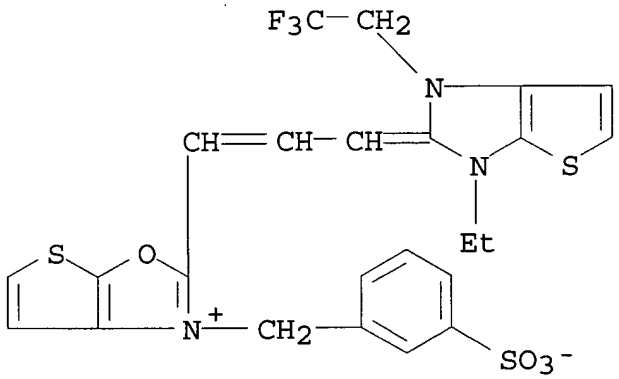
RN 259815-18-4 HCAPLUS
CN 6H-Thieno[3,2-b]pyrrolium, 4-(4-carboxybutyl)-5-[3-[4-(4-carboxybutyl)-4,6-dihydro-6,6-dimethyl-5H-thieno[3,2-b]pyrrol-5-ylidene]-1-propenyl]-6,6-dimethyl-, inner salt (9CI) (CA INDEX NAME)



RN 259815-19-5 HCAPLUS
CN Thieno[2,3-d]thiazolium, 2-[3-[4,6-dihydro-4,4-dimethyl-6-(4-sulfobutyl)-5H-thieno[2,3-b]pyrrol-5-ylidene]-1-propenyl]-3-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)

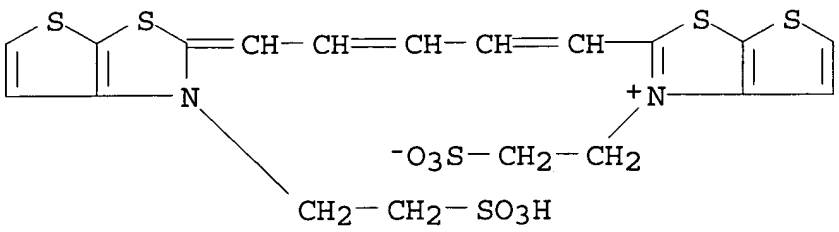


RN 259815-22-0 HCAPLUS
CN Thieno[3,2-d]oxazolium, 2-[3-[3-ethyl-1,3-dihydro-1-(2,2,2-trifluoroethyl)-2H-thieno[2,3-d]imidazol-2-ylidene]-1-propenyl]-1-[(3-sulfophenyl)methyl]-, inner salt (9CI) (CA INDEX NAME)

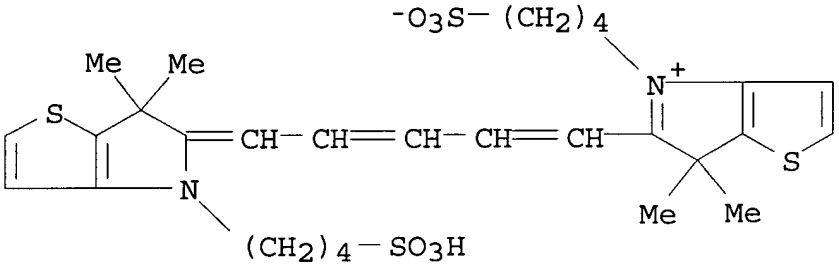


RN 259815-28-6 HCAPLUS
CN Thieno[3,2-d]thiazolium, 1-(2-sulfoethyl)-2-[5-[1-(2-

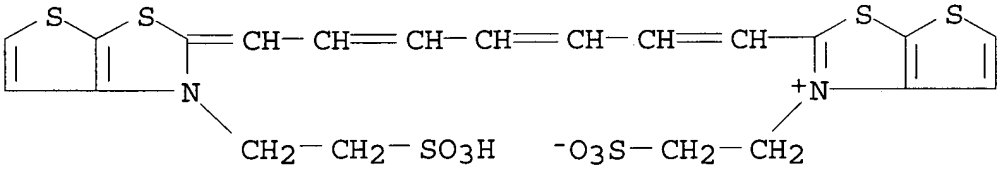
sulfoethyl)thieno[3,2-d]thiazol-2(1H)-ylidene]-1,3-pentadienyl]-, inner salt (9CI) (CA INDEX NAME)



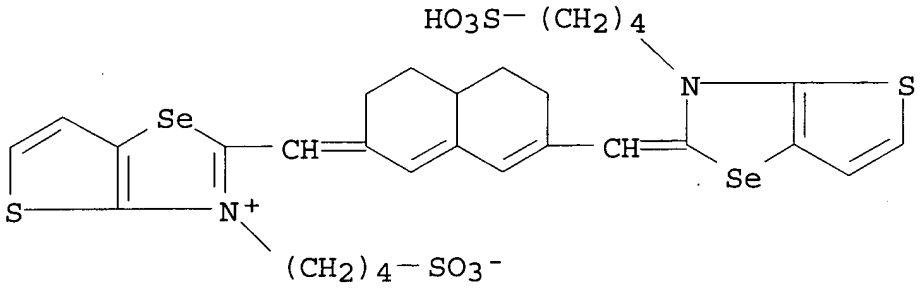
RN 259815-34-4 HCAPLUS
CN 6H-Thieno[3,2-b]pyrrolium, 5-[5-[4,6-dihydro-6,6-dimethyl-4-(4-sulfobutyl)-5H-thieno[3,2-b]pyrrol-5-ylidene]-1,3-pentadienyl]-6,6-dimethyl-4-(4-sulfobutyl)-, inner salt (9CI) (CA INDEX NAME)



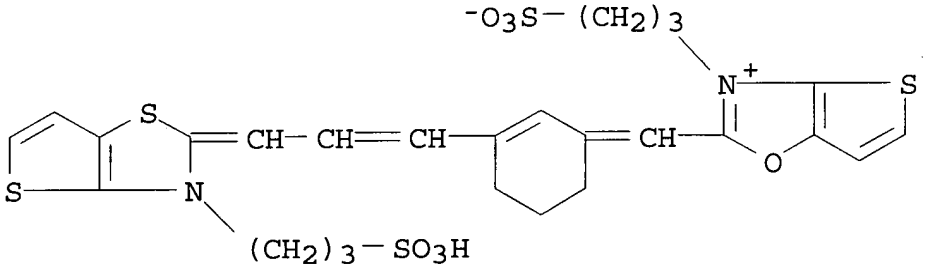
RN 259815-35-5 HCAPLUS
CN Thieno[3,2-d]thiazolium, 1-(2-sulfoethyl)-2-[7-[1-(2-sulfoethyl)thieno[3,2-d]thiazol-2(1H)-ylidene]-1,3,5-heptatrienyl]-, inner salt (9CI) (CA INDEX NAME)



RN 259815-36-6 HCAPLUS
CN Thieno[2,3-d]selenazolium, 3-(4-sulfobutyl)-2-[[4,4a,5,6-tetrahydro-7-[[3-(4-sulfobutyl)thieno[2,3-d]selenazol-2(3H)-ylidene]methyl]-2(3H)-naphthalenylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



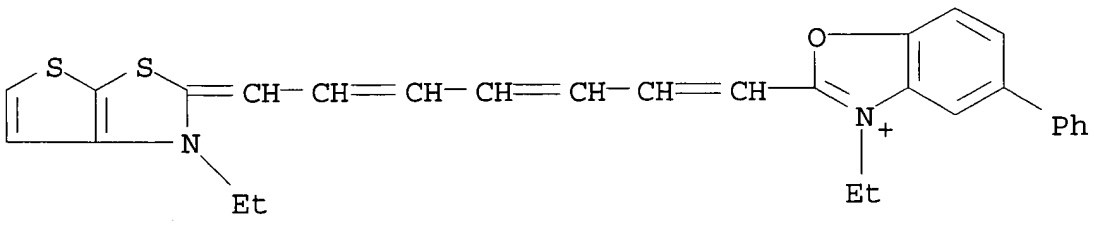
RN 259815-39-9 HCAPLUS
CN Thieno[2,3-d]oxazolium, 3-(3-sulfopropyl)-2-[[3-[3-[3-(3-sulfopropyl)thieno[2,3-d]thiazol-2(3H)-ylidene]-1-propenyl]-2-cyclohexen-1-ylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



RN 259815-52-6 HCAPLUS
CN Benzoxazolium, 3-ethyl-2-[7-(1-ethylthieno[3,2-d]thiazol-2(1H)-ylidene)-1,3,5-heptatrienyl]-5-phenyl-, perchlorate (9CI) (CA INDEX NAME)

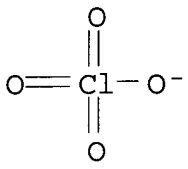
CM 1

CRN 259815-51-5
CMF C29 H27 N2 O S2

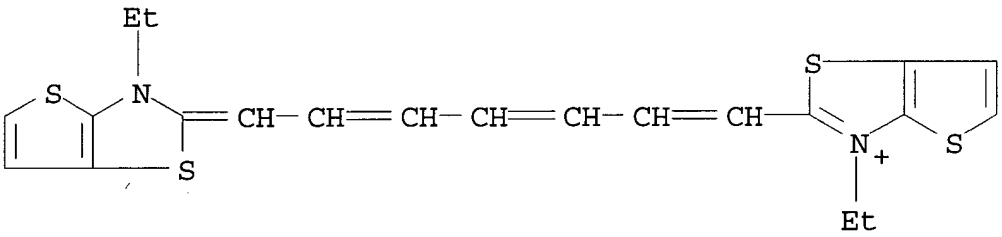


CM 2

CRN 14797-73-0
CMF Cl O4



IT **100170-12-5P**
(new **photog**. sensitizing dye in **silver halide** emulsion for **photog**. material)
RN 100170-12-5 HCAPLUS
CN Thieno[2,3-d]thiazolium, 3-ethyl-2-[7-(3-ethylthieno[2,3-d]thiazol-2(3H)-ylidene)-1,3,5-heptatrienyl]-, iodide (9CI) (CA INDEX NAME)



● I⁻

IC ICM C09B023-00
ICS G03C001-035; G03C001-12; G03C001-498
CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST methine dye **photog** sensitizer emulsion heat developable
IT **Photographic** films
(heat-developable; new **photog**. sensitizing dye and **silver halide** emulsion contg. the same for **photog**. material, heat-developable **photog**. material, and optical recording medium)
IT Optical recording materials
Photographic emulsions
Photographic films
Photographic paper
(new **photog**. sensitizing dye and **silver halide** emulsion contg. the same for **photog**. material, heat-developable **photog**. material, and optical recording medium)
IT **Photographic** sensitizers

(spectral; new **photog**. sensitizing dye and **silver halide** emulsion contg. the same for **photog**. material, heat-developable **photog**. material, and optical recording medium)

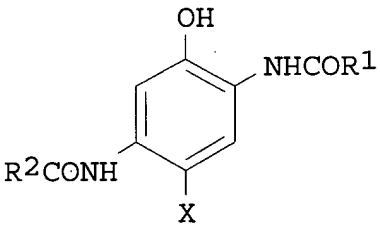
IT **259815-09-3 259815-10-6 259815-11-7**
259815-13-9 259815-14-0 259815-17-3 **259815-18-4**
259815-19-5 259815-20-8 259815-21-9 **259815-22-0**
259815-24-2 259815-25-3 259815-27-5 **259815-28-6**
259815-31-1 259815-33-3 **259815-34-4 259815-35-5**
259815-36-6 259815-37-7 259815-38-8 **259815-39-9**
259815-41-3 259815-42-4 259815-43-5 259815-44-6 259815-45-7
259815-46-8 259815-47-9 259815-49-1 259815-50-4
259815-52-6
(new **photog**. sensitizing dye in **silver halide** emulsion for **photog**. material)

IT **100170-12-5P** 259815-12-8P 259815-16-2P 259815-29-7P
(new **photog**. sensitizing dye in **silver halide** emulsion for **photog**. material)

IT 1497-49-0 37567-78-5 97451-08-6 259815-53-7 259815-54-8
259815-56-0 259815-58-2 259815-59-3
(prepn. of new **photog**. sensitizing dye)

L41 ANSWER 3 OF 29 HCAPLUS COPYRIGHT 2002 ACS
1995:511413 Document No. 122:251946 **Silver halide** color reversal **photographic** material. Fujiwara, Hiroko; Hirabayashi, Shigeto (Konishiroku Photo Ind, Japan). Jpn. Kokai Tokkyo Koho JP 06186702 A2 19940708 Heisei, 52 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1992-338605 19921218.

GI



I

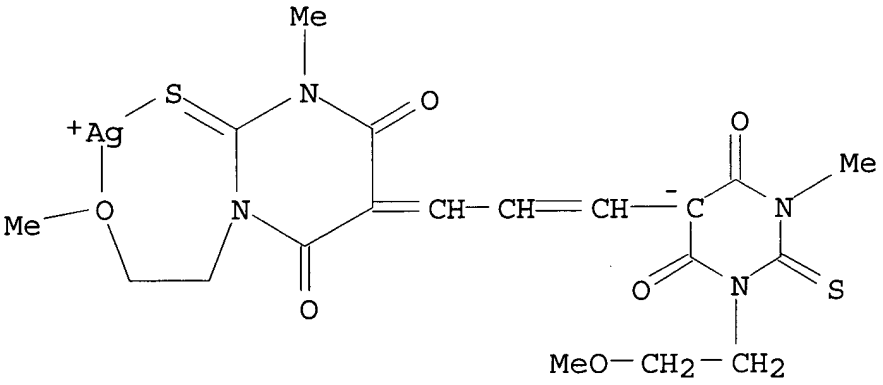
AB A **silver halide** color reversal **photog**. material showing high sensitivity and providing sharp high-d. **images** comprises blue-, green-, and red-sensitive **silver halide** emulsion layers on a support in which .gtoreq.1 of the emulsion layers contains .gtoreq.1 salt formed by reaction of silver ions with a dye having absorption in the visible region (380-700 nm) and .gtoreq.1 cyan coupler having the formula I (R1, R2 = alkyl, aryl, aralkyl, or amino; X = H or a group separable upon reaction with an oxidized **photog**,

developer).

IT **162560-40-9**
(**silver halide** color reversal **photog**
. materials contg.)

RN 162560-40-9 HCAPLUS

CN Silver, [5-[3-[hexahydro-1-(2-methoxyethyl)-3-methyl-4,6-dioxo-2-thioxo-5-pyrimidinyl]-2-propenylidene]dihydro-1-(2-methoxyethyl)-3-methyl-2-thioxo-4,6(1H,5H)-pyrimidinedionato-O1,S2]- (9CI) (CA INDEX NAME)



IC ICM G03C007-34
ICS G03C001-14; G03C001-83; G03C007-392

CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST **silver halide** color reversal **photog** material; dye silver salt color **photog** material

IT **Photographic** emulsions
(color, reversal, contg. dye silver salts)

IT **Photographic** couplers
(cyan, hydroxybis(alkylcarbonylamino)benzene derivs. as, for color reversal **photog**. materials)

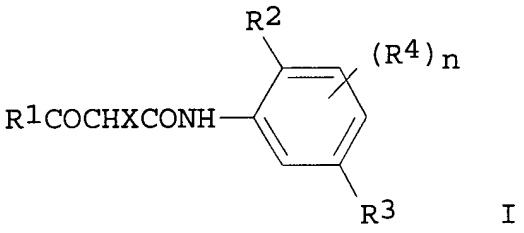
IT 2923-93-5 65749-35-1 88935-35-7 162545-70-2 162545-71-3 162545-72-4 162545-73-5 162545-74-6 162545-75-7 162545-76-8 162545-77-9 162545-78-0
(cyan coupler, for **silver halide** color reversal **photog**. materials)

IT 7440-22-4D, Silver, complexes with aza-contg. dyes 146407-84-3D, silver complexes 147641-29-0D, silver complexes 147641-34-7D, silver complexes 147641-38-1D, silver complexes 147641-41-6D, silver complexes 147641-61-0D, silver complexes 151090-08-3D, silver complexes 154577-05-6D, silver complexes 155162-69-9D, silver complexes 161389-77-1 161389-85-1D, silver complexes 161389-87-3 161389-89-5 162545-38-2 162545-39-3 162545-40-6 162545-41-7 162545-42-8 162545-44-0 162545-50-8 162545-62-2 162545-63-3D, silver complexes 162545-65-5 162545-66-6 162545-67-7 162545-68-8D, silver complexes 162545-69-9 **162560-40-9**

(**silver halide** color reversal **photog**
. materials contg.)

L41 ANSWER 4 OF 29 HCAPLUS COPYRIGHT 2002 ACS
1995:511412 Document No. 122:251945 **Silver halide** color reversal **photographic** material. Fujiwara, Hiroko; Hirabayashi, Shigeto (Konishiroku Photo Ind, Japan). Jpn. Kokai Tokkyo Koho JP 06186704 A2 19940708 Heisei, 53 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1992-336362 19921216.

GI



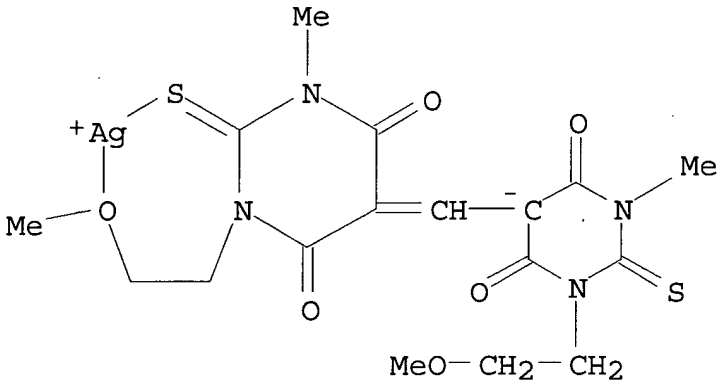
I

AB A **silver halide** color reversal **photog**. material showing improved photosensitivity, sharpness, and color d. comprises blue-, green-, and red-sensitive **silver halide** emulsion layers on a support in which .gtoreq.1 of the emulsion layers contains a silver salt of a dye having absorption in the visible region and .gtoreq.1 yellow coupler having the formula I (R1 = alkyl; R2 = halogen or alkoxy; R3 = a diffusion-resistant group; R4 = a group capable of substituting H atoms on a benzene ring; n = an integer of 0-3; X = H or a group separable upon reaction with an oxidized **photog**. developer).

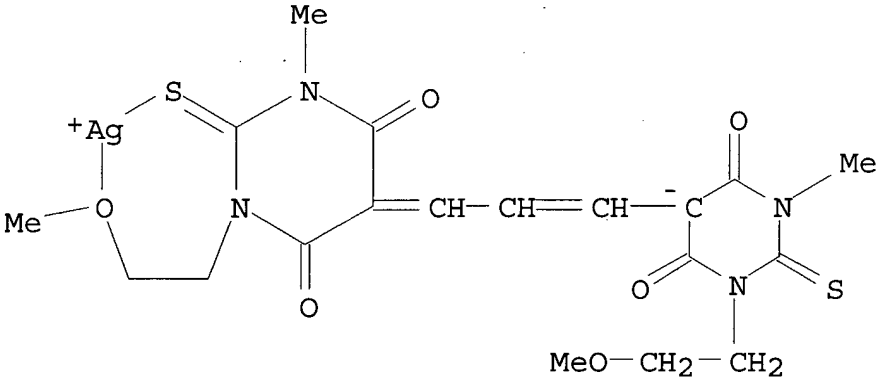
IT **162560-39-6 162560-40-9**
(**silver halide** color reversal **photog**
. materials contg.)

RN 162560-39-6 HCAPLUS

CN Silver, [5-[[hexahydro-1-(2-methoxyethyl)-3-methyl-4,6-dioxo-2-thioxo-5-pyrimidinyl]methylene]dihydro-1-(2-methoxyethyl)-3-methyl-2-thioxo-4,6(1H,5H)-pyrimidinedionato-O1,S2]- (9CI) (CA INDEX NAME)



RN 162560-40-9 HCAPLUS
CN Silver, [5-[3-[hexahydro-1-(2-methoxyethyl)-3-methyl-4,6-dioxo-2-thioxo-5-pyrimidinyl]-2-propenylidene]dihydro-1-(2-methoxyethyl)-3-methyl-2-thioxo-4,6(1H,5H)-pyrimidinedionato-O1,S2]- (9CI) (CA INDEX NAME)



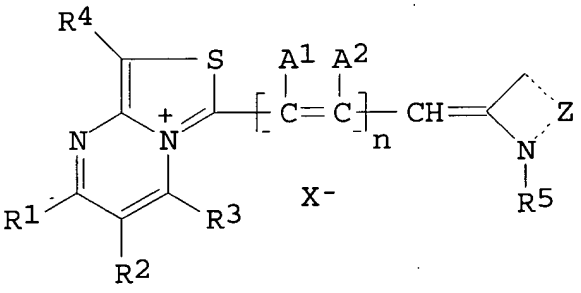
IC ICM G03C007-36
ICS G03C001-14; G03C001-83; G03C007-392
CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST **silver halide** color reversal **photog** material; yellow **photog** coupler acetanilide deriv
IT **Photographic** emulsions
(color, reversal, contg. dye silver salts)
IT **Photographic** couplers
(yellow, acetanilide derivs. as, for color reversal **photog**. materials)
IT 7440-22-4D, Silver, complexes with aza-contg. dyes 147641-38-1D, silver complexes 147641-42-7D, silver complexes 147641-57-4D, silver complexes 154577-05-6D, silver complexes 155162-60-0D, silver complexes 155162-67-7D, silver complexes 155162-68-8D, silver complexes 161389-85-1 162545-38-2 162545-39-3

162545-40-6 162545-41-7 162545-42-8 162545-43-9 162545-44-0
162545-48-4D, silver complexes 162545-49-5 162545-50-8
162560-39-6 162560-40-9
(**silver halide** color reversal **photog**
. materials contg.)

IT 116312-77-7 162545-51-9 162545-52-0 162545-53-1 162545-54-2
162545-55-3 162545-56-4 162545-57-5 162545-58-6 162545-59-7
162545-60-0
(yellow coupler, for color reversal **photog**. materials)

L41 ANSWER 5 OF 29 HCAPLUS COPYRIGHT 2002 ACS
1994:495885 Document No. 121:95885 Prefogged direct-reversal **silver halide photographic** materials.
Takagi, Yoshihiro; Inagaki, Yoshio (Fuji Photo Film Co Ltd, Japan).
Jpn. Kokai Tokkyo Koho JP 06059370 A2 19940304 Heisei, 16 pp.
(Japanese). CODEN: JKXXAF. APPLICATION: JP 1992-212670 19920810.

GI



I

AB On the material comprising a support coated with .gtoreq.1 prefogged direct-pos. **Ag halide** emulsion layer on a support, the layer contains I [A1-2 = H, substituent; Z = atoms to form 5-membered heterocycle; R1-4 = H, substituent; R5 = substituent or may form 6-membered heterocycle together with Z; n = 0-2, X- = anion]. The material gives clear reversal **images** on high luminance exposure.

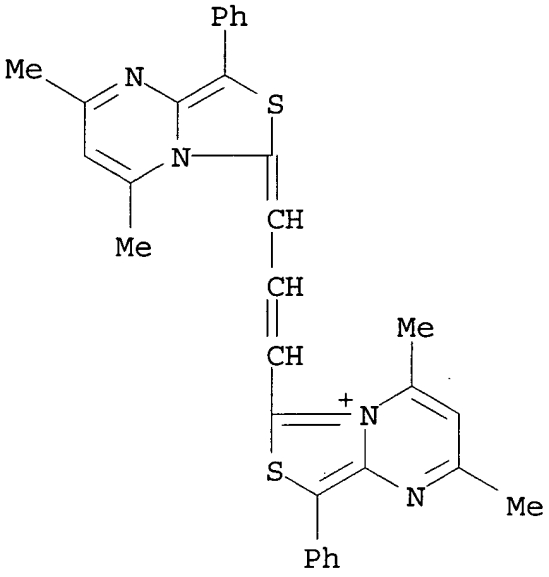
IT **84228-81-9P 86626-81-5P**
(prepn. of, desensitizer, prefogged direct-pos. **silver halide photog**. emulsion contg.)

RN 84228-81-9 HCAPLUS

CN Thiazolo[3,4-a]pyrimidin-5-ium, 6-[3-(2,4-dimethyl-8-phenyl-6H-thiazolo[3,4-a]pyrimidin-6-ylidene)-1-propenyl]-2,4-dimethyl-8-phenyl-, perchlorate (9CI) (CA INDEX NAME)

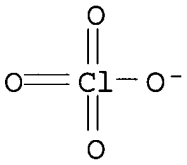
CM 1

CRN 84228-80-8
CMF C31 H27 N4 S2



CM 2

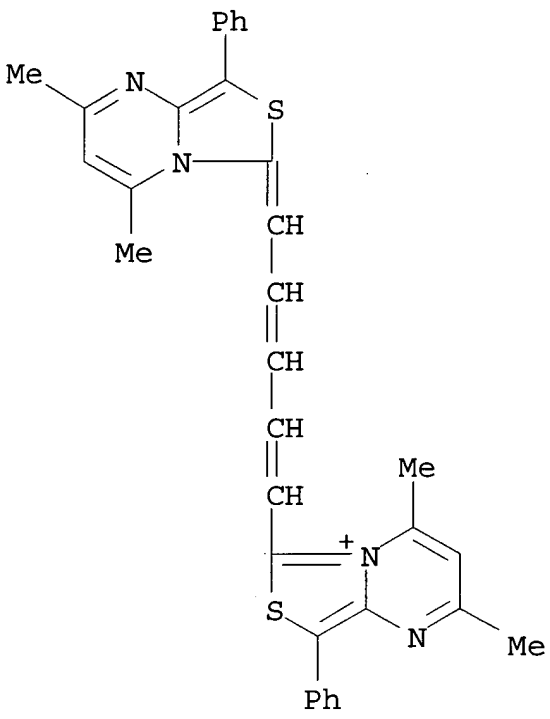
CRN 14797-73-0
CMF Cl O4



RN 86626-81-5 HCAPLUS
CN Thiazolo[3,4-a]pyrimidin-5-ium, 6-[5-(2,4-dimethyl-8-phenyl-6H-thiazolo[3,4-a]pyrimidin-6-ylidene)-1,3-pentadienyl]-2,4-dimethyl-8-phenyl-, perchlorate (9CI) (CA INDEX NAME)

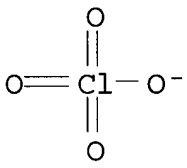
CM 1

CRN 86626-80-4
CMF C33 H29 N4 S2



CM 2

CRN 14797-73-0
CMF Cl O4



IC ICM G03C001-485
ICS G03C001-00; G03C001-035; G03C001-36
CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 41
ST direct pos **silver halide photog**; prefogged **photog** emulsion desensitizer; cyanine thiazol pyrimidine dye **photog**
IT **Photographic** emulsions
(direct-pos., prefogged, contg. cyanine dye as desensitizer)
IT 115924-52-2 156184-32-6 156184-33-7
(desensitizer, prefogged direct pos. **silver halide photog**. emulsion contg.)

IT **84228-81-9P** 86626-77-9P **86626-81-5P**
(prepn. of, desensitizer, prefogged direct-pos. **silver halide photog.** emulsion contg.)

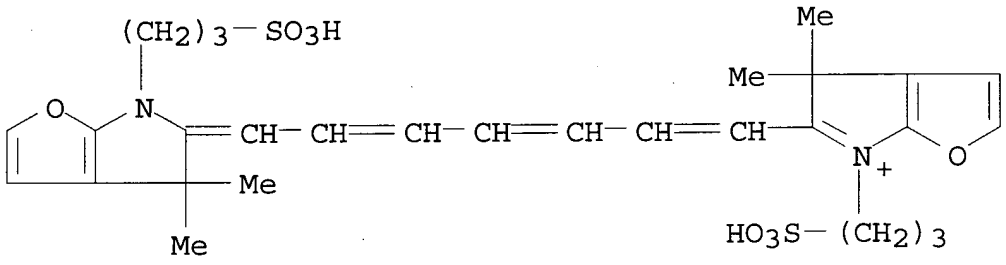
L41 ANSWER 6 OF 29 HCAPLUS COPYRIGHT 2002 ACS
1992:601764 Document No. 117:201764 **Photographic** material with superior antistatic properties and suppressed residual color. Yoshida, Kazuhiro (Konica Co., Japan). Jpn. Kokai Tokkyo Koho JP 04027938 A2 19920130 Heisei, 19 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1990-133114 19900523.

AB The title **Ag halide photog.** material utilizes (1) .gtoreq.1 layers contg. the reaction products of a water-sol. elec. conductive polymer, hydrophobic polymer particles, and an epoxy hardener, and (2) an adjacent hydrophilic colloid layer contg. .gtoreq.1 dyes selected from hepta- and nonamethine cyanine dyes contg. pyrrolopyridine, thienopyrrole, and furopyrrole parent nuclei contg. .gtoreq.2 substituents contg. .gtoreq.2 acid groups or .gtoreq.1 CH2CH2OR (R = H, alkyl).

IT **139412-07-0 143986-79-2**
(backing layer dye, **photog.** film using)

RN 139412-07-0 HCAPLUS

CN 4H-Furo[2,3-b]pyrrolium, 5-[7-[4,6-dihydro-4,4-dimethylsulfo-6-(3-sulfopropyl)-5H-furo[2,3-b]pyrrol-5-ylidene]-1,3,5-heptatrienyl]-4,4-dimethylsulfo-6-(3-sulfopropyl)-, inner salt, trisodium salt (9CI) (CA INDEX NAME)



D1—SO3-

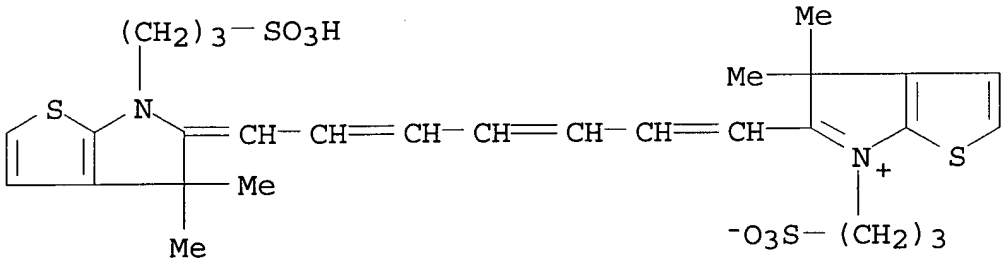
D1—SO3H

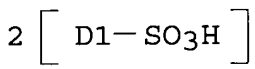
3 Na

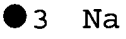
RN 143986-79-2 HCAPLUS

CN 4H-Thieno[2,3-b]pyrrolium, 5-[7-[4,6-dihydro-4,4-dimethylsulfo-6-(3-

sulfopropyl)-5H-thieno[2,3-b]pyrrol-5-ylidene]-1,3,5-heptatrienyl]-4,4-dimethylsulfo-6-(3-sulfopropyl)-, inner salt, trisodium salt (9CI) (CA INDEX NAME)







IC ICM G03C001-89
ICS G03C001-83
CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST antistatic **photog** film residual color; methine dye **photog** film
IT **Photographic** films
(antistatic, with residual color suppressed)
IT 126734-19-8 **139412-07-0** 142492-33-9 143964-13-0
143986-78-1 **143986-79-2** 144011-24-5
(backing layer dye, **photog**. film using)
IT 134119-91-8 134269-89-9 134437-69-7
(elec. conductive polymer, antistatic layer for **photog**. film contg.)
IT 3568-29-4 25722-70-7 28411-25-8 143987-21-7
(epoxy hardener, for antistatic layer, **photog**. film using)
IT 9081-45-2 25586-25-8 66167-58-6
(hydrophobic latex, antistatic layer for **photog**. film contg.)

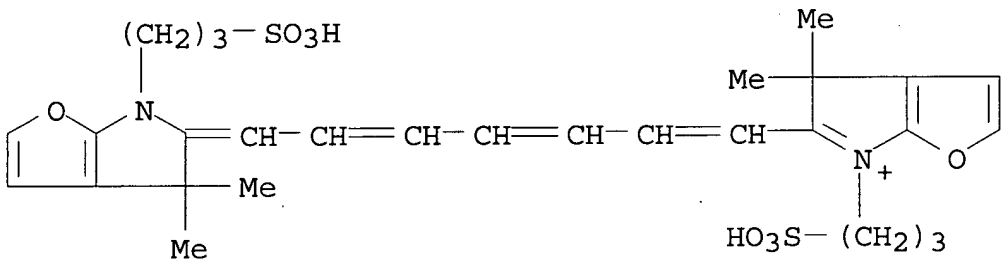
L41 ANSWER 7 OF 29 HCAPLUS COPYRIGHT 2002 ACS
1992:265688 Document No. 116:265688 Heat-developable photosensitive material giving **images** with improved sharpness. Suda, Yoshihiko; Ohayashi, Keiji; Usagawa, Yasushi (Konica Co., Japan). Jpn. Kokai Tokkyo Koho JP 03135553 A2 19910610 Heisei, 32 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1989-274435 19891020.

AB The title material, comprising a support having thereon photosensitive **silver halide**, a reducing agent and/or a precursor of a reducing agent, and a binder, contains least one dye selected from a group of hepta- and nonamethine cyanine dyes which have at least two groups having one or more CH2CH2OR (R = H, alkyl) radicals or are pyrrolopyridine, thienopyrrole rings, etc., each of the said pyrrolopyridine or thienopyrrole dyes has at least two acidic groups. The use of the title material gives **images** with improved sharpness.

IT **139412-07-0 139412-08-1**
(dye, in heat-developable photosensitive material)

RN 139412-07-0 HCAPLUS

CN 4H-Furo[2,3-b]pyrrolium, 5-[7-[4,6-dihydro-4,4-dimethylsulfo-6-(3-sulfopropyl)-5H-furo[2,3-b]pyrrol-5-ylidene]-1,3,5-heptatrienyl]-4,4-dimethylsulfo-6-(3-sulfopropyl)-, inner salt, trisodium salt (9CI) (CA INDEX NAME)



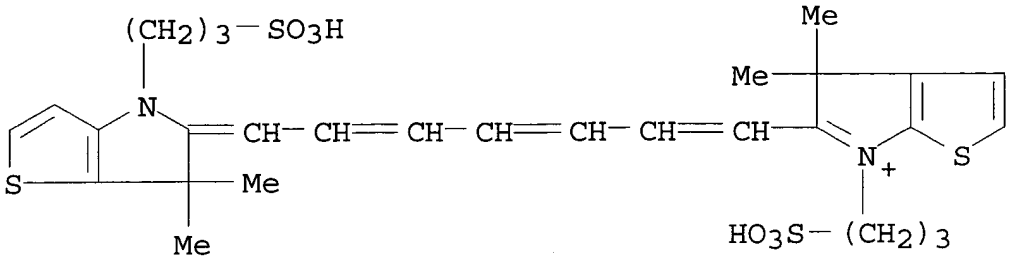
D1—SO3-

D1—SO3H

●3 Na

RN 139412-08-1 HCAPLUS

CN 6H-Thieno[3,2-b]pyrrolium, 5-[7-[4,6-dihydro-6,6-dimethylsulfo-4-(3-sulfopropyl)-5H-thieno[3,2-b]pyrrol-5-ylidene]-1,3,5-heptatrienyl]-6,6-dimethylsulfo-4-(3-sulfopropyl)-, inner salt, trisodium salt (9CI) (CA INDEX NAME)



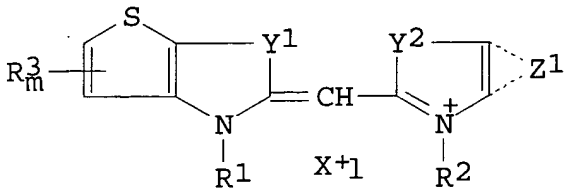
D1— SO_3^-

D1— SO_3H

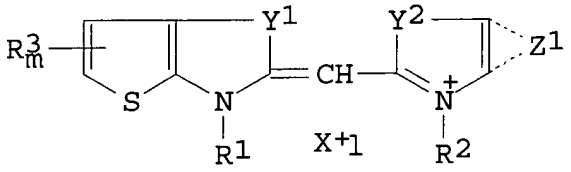
● 3 Na

IC ICM G03C008-40
CC **74-7** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 41
IT Photothermographic copying
(dyes in material for, for **images** with improved sharpness)
IT 126829-26-3 126854-12-4 131033-84-6 131033-85-7 139390-68-4
139412-06-9 **139412-07-0 139412-08-1**
141138-36-5 141631-69-8
(dye, in heat-developable photosensitive material)

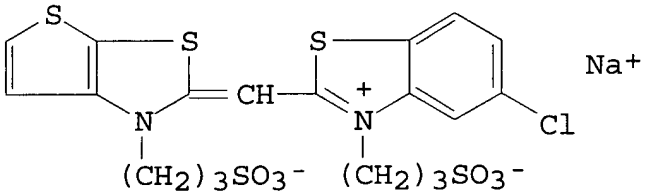
L41 ANSWER 8 OF 29 HCAPLUS COPYRIGHT 2002 ACS
1991:643892 Document No. 115:243892 **Silver halide photographic** material containing condensed thienyl methine sensitizer. Kagawa, Nobuaki; Usagawa, Yasushi; Kawashima, Yasuhiko (Konica Co., Japan). Jpn. Kokai Tokkyo Koho JP 03107140 A2 19910507 Heisei, 14 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1989-246011 19890920.
GI



I



II



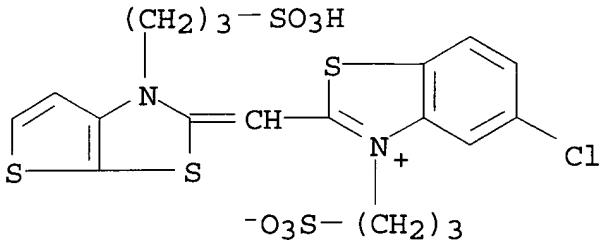
III

AB The title material has .gtoreq.1 layer(s) contg. **AgCl** -based particles and condensed thienyl methine sensitizer I and/or II (Y1, Y2 = S, Se; R1, R2 = water-sol. group-substituted alkyl or alkenyl; R3 = substituent; Z1 = at. group forming 6-membered ring; l = 0, 1; m = 0-2). A **silver halide** **photog**. film contg. blue-sensitive layer with a methine sensitizer III showed fog inhibition,.

IT **137350-22-2 137350-24-4 137350-25-5**
137350-26-6 137350-28-8 137350-29-9
137350-30-2 137350-32-4 137350-33-5
137350-35-7 137371-81-4 137371-83-6
(sensitizer, for **silver chloride**-based **photog**. emulsion)

RN 137350-22-2 HCAPLUS

CN Benzothiazolium, 5-chloro-3-(3-sulfopropyl)-2-[[1-(3-sulfopropyl)thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)

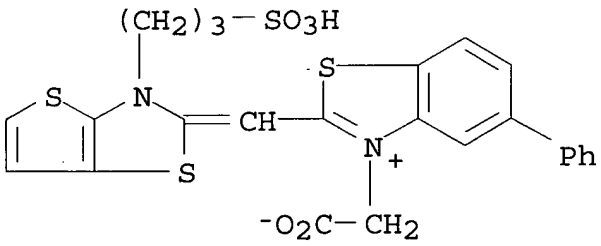


● Na

RN 137350-24-4 HCAPLUS
CN Benzothiazolium, 3-(carboxymethyl)-5-phenyl-2-[[3-(3-sulfopropyl)thieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

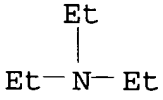
CM 1

CRN 137350-23-3
CMF C24 H20 N2 O5 S4

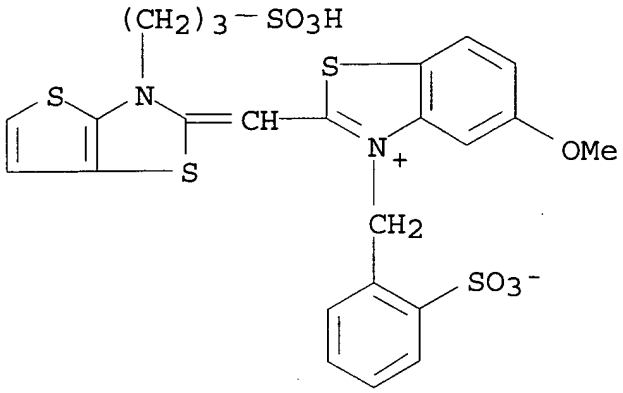


CM 2

CRN 121-44-8
CMF C6 H15 N

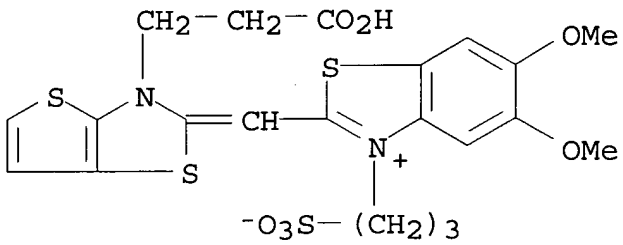


RN 137350-25-5 HCAPLUS
CN Benzothiazolium, 5-methoxy-3-[(2-sulfophenyl)methyl]-2-[[3-(3-sulfopropyl)thieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-, inner salt, lithium salt (9CI) (CA INDEX NAME)



● Li

RN 137350-26-6 HCAPLUS
CN Benzothiazolium, 2-[[3-(2-carboxyethyl)thieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-5,6-dimethoxy-3-(3-sulfopropyl)-, inner salt, potassium salt (9CI) (CA INDEX NAME)

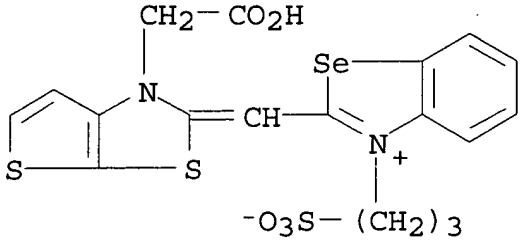


● K

RN 137350-28-8 HCAPLUS
CN Benzoselenazolium, 2-[[1-(carboxymethyl)thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-3-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

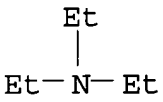
CM 1

CRN 137350-27-7
CMF C18 H16 N2 O5 S3 Se

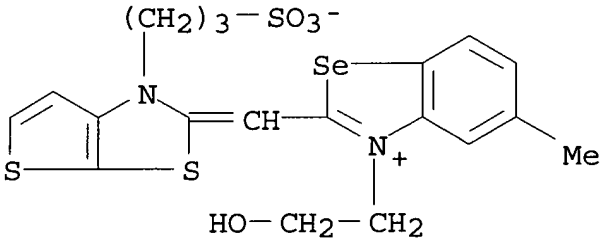


CM 2

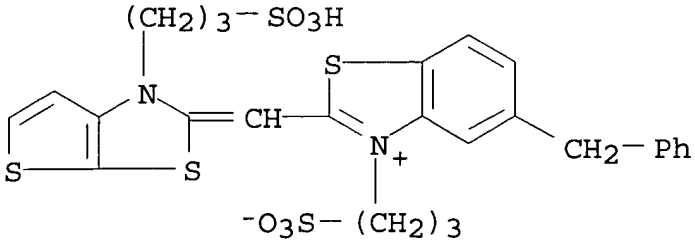
CRN 121-44-8
CMF C6 H15 N



RN 137350-29-9 HCAPLUS
CN Benzoselenazolium, 3-(2-hydroxyethyl)-5-methyl-2-[[1-(3-sulfopropyl)thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-, inner salt (9CI) (CA INDEX NAME)



RN 137350-30-2 HCAPLUS
CN Benzothiazolium, 5-(phenylmethyl)-3-(3-sulfopropyl)-2-[[1-(3-sulfopropyl)thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-, inner salt, sodium salt (9CI) (CA INDEX NAME)

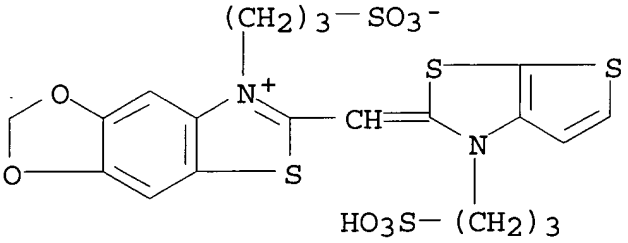


● Na

RN 137350-32-4 HCAPLUS
CN 1,3-Dioxolo[4,5-f]benzothiazolium, 7-(3-sulfopropyl)-6-[[1-(3-sulfopropyl)thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

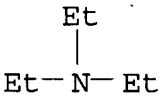
CM 1

CRN 137350-31-3
CMF C20 H20 N2 O8 S5

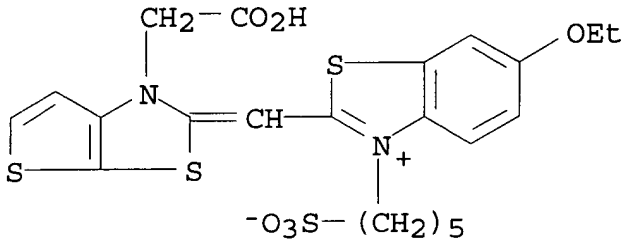


CM 2

CRN 121-44-8
CMF C6 H15 N



RN 137350-33-5 HCAPLUS
CN Benzothiazolium, 2-[[1-(carboxymethyl)thieno[3,2-d]thiazol-2(1H)-ylidene]methyl]-6-ethoxy-3-(5-sulfopentyl)-, inner salt, lithium salt (9CI) (CA INDEX NAME)

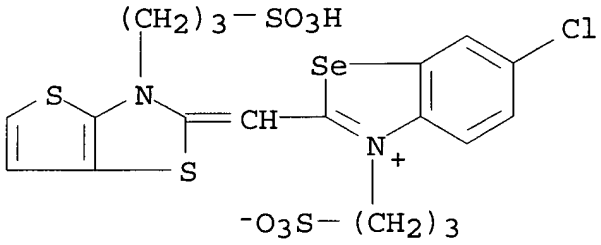


● Li

RN 137350-35-7 HCAPLUS
CN Benzoselenazolium, 6-chloro-3-(3-sulfopropyl)-2-[[3-(3-sulfopropyl)thieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-, inner salt, compd with 1,4-diazabicyclo[2.2.2]octane (1:1) (9CI) (CA INDEX NAME)

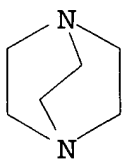
CM 1

CRN 137350-34-6
CMF C19 H19 Cl N2 O6 S4 Se

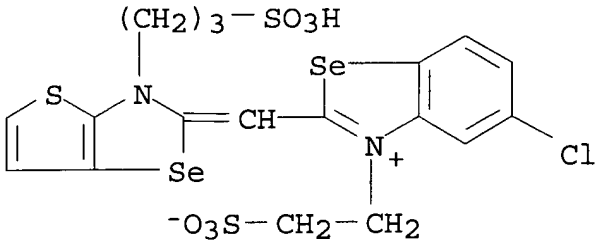


CM 2

CRN 280-57-9
CMF C6 H12 N2



RN 137371-81-4 HCAPLUS
CN Benzoselenazolium, 5-chloro-3-(2-sulfoethyl)-2-[[3-(3-sulfopropyl)thieno[2,3-d]selenazol-2(3H)-ylidene]methyl]-, inner salt, lithium salt (9CI) (CA INDEX NAME)

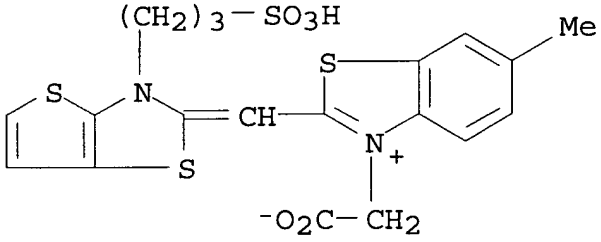


● Li

RN 137371-83-6 HCAPLUS
CN Benzothiazolium, 3-(carboxymethyl)-6-methyl-2-[[3-(3-sulfopropyl)thieno[2,3-d]thiazol-2(3H)-ylidene]methyl]-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

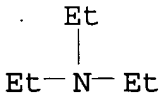
CM 1

CRN 137371-82-5
CMF C19 H18 N2 O5 S4



CM 2

CRN 121-44-8
CMF C6 H15 N



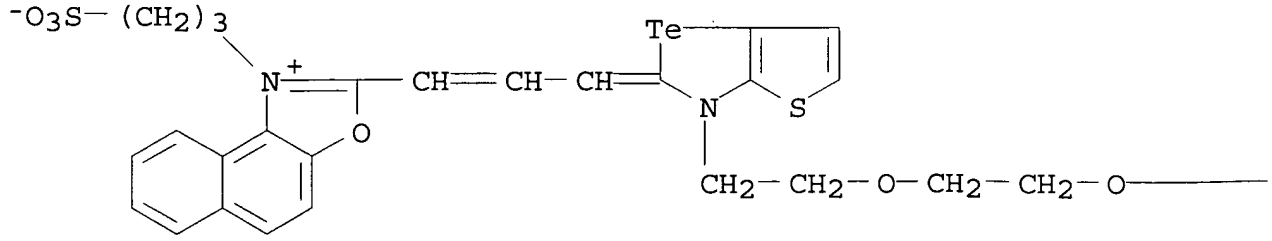
IC ICM G03C001-14
CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST **silver halide photog** emulsion sensitizer; thienyl methine sensitizer **photog**; fog inhibition **silver chloride** emulsion
IT **Photographic** sensitizers
(condensed thienyl methines, for **silver chloride**-based emulsion)
IT **137350-22-2 137350-24-4 137350-25-5 137350-26-6 137350-28-8 137350-29-9 137350-30-2 137350-32-4 137350-33-5 137350-35-7 137371-81-4 137371-83-6**
(sensitizer, for **silver chloride**-based **photog**. emulsion)

L41 ANSWER 9 OF 29 HCAPLUS COPYRIGHT 2002 ACS
1988:195824 Document No. 108:195824 Spectrally sensitized **photographic** materials. Nakayama, Tomoyoshi; Suda, Yoshihiko; Hoshino, Hiroyuki; Matsuzaka, Masashi; Yoshizawa, Tomomi (Konishiroku Photo Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 62204250 A2 19870908 Showa, 25 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1986-47906 19860304.
AB The title **photog**. materials contain emulsion layers contg. **AgBr** or Ag(Br,I) grains with (110) surfaces and tellurazole type sensitizers. The **photog**. materials show high sensitivity even when a relatively small amt. of Ag is used.
IT **114358-40-6**
(**photog**. sensitizer)
RN 114358-40-6 HCAPLUS
CN Naphth[1,2-d]oxazolium, 2-[3-[3-[2-[2-(4-sulfobutoxy)ethoxy]ethyl]thieno[2,3-d]tellurazol-2(3H)-ylidene]-1-propenyl]-1-(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 114358-39-3
CMF C30 H34 N2 O9 S3 Te

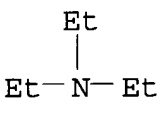
PAGE 1-A



PAGE 1-B

CM 2

CRN 121-44-8
CMF C6 H15 N



IC ICM G03C001-02
ICS G03C001-12
CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 42
ST emulsion **photog** tellurazole sensitizer
IT **Photographic** emulsions
(crystallog. of **silver halide** grains in, sensitivity in relation to)
IT **Photographic** sensitizers
(spectral, tellurazole type cyanine dyes as)
IT 108285-68-3 108285-82-1 108285-83-2 114175-94-9 114175-95-0 114266-28-3 **114358-40-6**
(**photog**. sensitizer)
IT 97426-31-8P 108318-85-0P
(prepn. of, as **photog**. spectral sensitizer)
IT 35080-47-8, 2-(2-Acetanilidovinyl)-3-ethylbenzothiazolium iodide 89723-09-1, 2-Methylbenzotellurazole 108285-75-2 108285-76-3, 2-(2-Acetanilidovinyl)-3-(2-hydroxyethyl)-benzothiazolium iodide 108286-01-7
(reaction of, **photog**. spectral sensitizer from)

L41 ANSWER 10 OF 29 HCAPLUS COPYRIGHT 2002 ACS
1987:524468 Document No. 107:124468 **Silver halide photographic** photosensitive materials. Takahashi, Nensho; Kunieda, Sunao; Kagawa, Nobuaki; Kamitakahara, Atsushi (Konishiroku Photo Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 61282834 A2 19861213 Showa, 28 pp. (Japanese). CODEN: JKXXAF.

APPLICATION: JP 1985-124958 19850608.

GI For diagram(s), see printed CA Issue.

AB The claimed **photog.** materials contain .gtoreq.1 emulsion layers which are spectrally super-sensitized by using a dye I [Z1, Z2 = pyrroline, pyridine, indolenine, benzimidazole, oxazole, benzoxazole, naphthoxazole, thiazoline, thiazole, benzothiazole, naphthothiazole, selenazole, benzoselenazole, or naphthoselenazole ring; R1, R2 = aliph. moiety with/without O or S linkage(s); .gtoreq.1 of R1 and R2 is substituted with OH, CO2H, or SO3H group; X- = anion; n = 0, 1] together with a tellurazole deriv. dye. The tellurazole dye is selected from II and III [R3, R4 = H, substituent; .gtoreq.1 of R3, R4 = alkyl, aryl; R5, R11 = quaternary group; R6, R10 = H, alkyl, aralkyl, aryl, heterocyclyl, amino, CN, alkylthio, arylthio, alkoxy, aryloxy; R7-R9 = halo, acidic ring, R6; R12-R14 = H, alkyl, aralkyl, aryl, alkylthio, cyano, arylthio, alkoxy, aryloxy; Q = heterocycle; Y- = anion; E = acidic ring; R3R4, R4R5, R5R6, R6R10, R7R9, R10R11, and R12R14 combinations may form rings; m, p, s = 0, 1; r = 0, pos. integer detd. by the charge; g = 0, 1, 2].

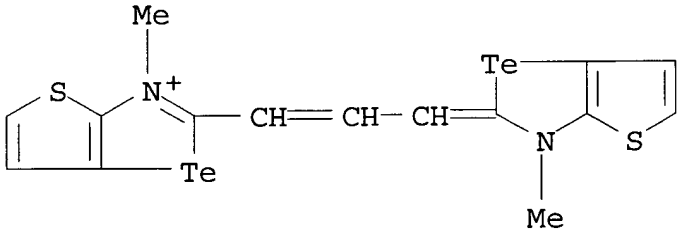
IT **109057-17-2 110208-13-4**
(**photog.** supersensitizer compns. contg.)

RN 109057-17-2 HCAPLUS

CN Thieno[2,3-d]tellurazolium, 3-methyl-2-[3-(3-methylthieno[2,3-d]tellurazol-2(3H)-ylidene)-1-propenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

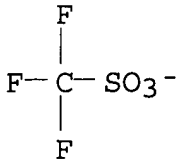
CM 1

CRN 108497-58-1
CMF C15 H13 N2 S2 Te2

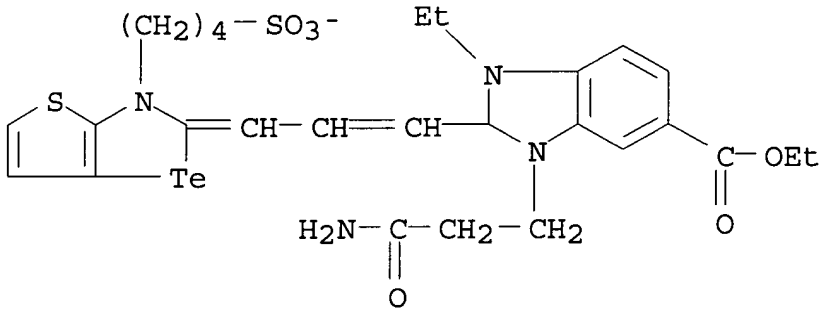


CM 2

CRN 37181-39-8
CMF C F3 O3 S



RN 110208-13-4 HCAPLUS
CN 1H-Benzimidazolium, 3-(3-amino-3-oxopropyl)-5-(ethoxycarbonyl)-1-ethyl-2-[3-[3-(4-sulfobutyl)thieno[2,3-d]tellurazol-2(3H)-ylidene]-1-propenyl]-, inner salt (9CI) (CA INDEX NAME)

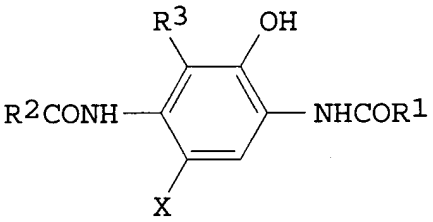


*** FRAGMENT DIAGRAM IS INCOMPLETE ***
IC ICM G03C001-28
ICS C07D421-06
ICI C07D421-06, C07D277-00, C07D293-00; C07D421-06, C07D263-00, C07D293-00
CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST supersensitization **silver halide photog** emulsion; dye sensitizer tellurazole deriv; cyanine dye **photog** sensitizer
IT 55425-23-5 60760-37-4 60760-38-5 60760-40-9 60760-43-2 60760-44-3 60760-50-1 108465-44-7 **109057-17-2** 110208-04-3 110208-05-4 110208-06-5 110208-08-7 110208-09-8 110208-10-1 110208-11-2 110208-12-3 **110208-13-4** 110208-14-5 110208-15-6 110225-55-3
(**photog**. supersensitizer compns. contg.)
IT 102365-43-5P 108286-34-6P 108410-79-3P 108464-92-2P 108464-93-3P 108464-94-4P 108465-25-4P 108465-26-5P 108497-53-6P 108497-55-8P 109625-28-7P 110208-03-2P
(prepn. of, as **photog**. sensitizer dye)
IT 78-59-1, Isophorone 122-51-0 333-27-7 622-15-1, Diphenylformamidine 5718-83-2 55425-51-9 70867-59-3 75504-95-9 97425-67-7, 2,3,5-Trimethylbenzotellurazolium trifluoromethanesulfonate 108285-75-2 108285-76-3 108286-35-7, 3-(5-Chloro-2-(2-methylthio-1-propenyl)-3-benzothiazole)propane sulfonate inner salt 108465-18-5 108465-20-9 108465-21-0

108465-40-3 108465-41-4 108465-42-5 108465-43-6,
5-Fluoro-2-methylbenzotellurazole 108497-54-7 108497-78-5
108497-86-5 108497-87-6 110126-58-4
(reaction of, **photog**. sensitizer dye from)

L41 ANSWER 11 OF 29 HCAPLUS COPYRIGHT 2002 ACS
1987:506161 Document No. 107:106161 **Silver halide**
color **photographic** photosensitive materials. Usagawa,
Yasushi; Kamitakahara, Atsushi; Ishikawa, Hisashi; Kunieda, Sunao
(Konishiroku Photo Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo
Koho JP 61277939 A2 19861208 Showa, 33 pp. (Japanese). CODEN:
JKXXAF. APPLICATION: JP 1985-119364 19850601.

GI



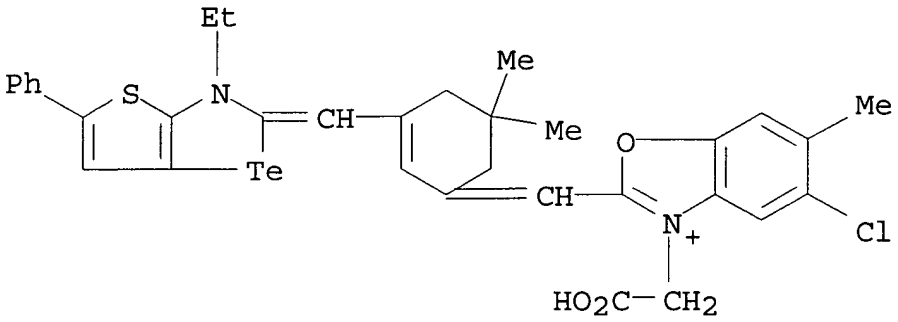
I

AB The claimed **photog**. materials contain tellurazole deriv.
type sensitizing dyes and cyan couplers of the formula I (R1, R2 =
alkyl, aryl, heterocyclyl, alkyloxy, aryloxy, heterocyclyloxy,
alkylamino, arylamino, heterocyclic amino; R3 = H, substituent; R2R3
combination may form a ring; X = H, a substituent released during
coupling reaction). The **photog**. materials show good
storage stability.

IT **110126-74-4**
(**photog**. dye sensitizer)

RN 110126-74-4 HCAPLUS

CN Benzoxazolium, 3-(carboxymethyl)-5-chloro-2-[[3-[(3-ethyl-5-phenylthieno[2,3-d]tellurazol-2(3H)-ylidene)methyl]-5,5-dimethyl-2-cyclohexen-1-ylidene]methyl]-6-methyl-, bromide (9CI) (CA INDEX NAME)

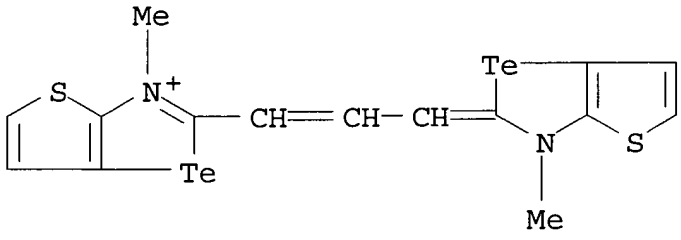


● Br^-

IT **109057-17-2**
(**photog.** sensitizer)
RN 109057-17-2 HCAPLUS
CN Thieno[2,3-d]tellurazolium, 3-methyl-2-[3-(3-methylthieno[2,3-d]tellurazol-2(3H)-ylidene)-1-propenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

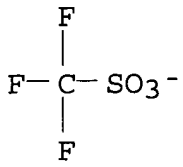
CM 1

CRN 108497-58-1
CMF C15 H13 N2 S2 Te2



CM 2

CRN 37181-39-8
CMF C F3 O3 S



IC ICM G03C001-12
ICS G03C007-34
ICA C07D213-18; C07D215-38; C07D235-26; C07D249-18; C07D257-04; C07D265-36; C07D293-10; C07D421-06; C07D498-04; C07D517-04; C07D517-06; C07D519-00
ICI C07D421-06, C07D263-00, C07D293-00; C07D421-06, C07D277-00, C07D293-00
CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 71
ST cyan coupler **photog** diacylaminophenol deriv; tellurazole deriv **photog** sensitizing dye; phenol deriv **photog** cyan coupler
IT **Photographic** films
Photographic paper
(color, storage stability improvement of)
IT **Photographic** couplers
(cyan, diacylaminophenol derivs. as)
IT **Photographic** sensitizers
(spectral, tellurazole deriv. dyes as)
IT 2923-93-5 63573-38-6 65749-35-1 72494-14-5 90936-93-9 92589-17-8 93749-79-2 94589-35-2 94725-55-0 96758-05-3 101755-93-5 102604-67-1 110126-80-2 110126-81-3 110126-82-4 110126-83-5 110160-70-8
(**photog**. cyan coupler)
IT 108286-23-3 108464-98-8 108465-09-4 108497-61-6 108770-21-4 108802-01-3 108802-02-4 **110126-74-4** 110126-76-6
(**photog**. dye sensitizer)
IT 102365-43-5 108285-70-7 108285-77-4 108285-81-0 108285-83-2 108285-99-0 108286-26-6 108286-27-7 108286-28-8 108286-34-6 108410-79-3 108464-91-1 108464-93-3 108464-94-4 108464-95-5 108465-25-4 108465-26-5 108465-44-7 108497-53-6 **109057-17-2** 110126-77-7
(**photog**. sensitizer)
IT 333-27-7, Methyl trifluoromethanesulfonate 598-03-8 622-15-1, Diphenylformamidine 3176-77-0 5718-83-2 35080-47-8 55425-51-9 70867-59-3 75504-95-9 89723-09-1 97425-67-7 108286-01-7 108286-35-7 108465-20-9 108465-21-0 108465-24-3 108465-40-3 108465-41-4 108465-42-5 108465-43-6 108497-57-0 108497-78-5 108497-80-9 108497-83-2 108497-85-4 110126-56-2 110126-58-4
(reaction of, **photog**. dye sensitizer from)

L41 ANSWER 12 OF 29 HCAPLUS COPYRIGHT 2002 ACS

1987:506160 Document No. 107:106160 **Silver halide** color **photographic** photosensitive materials. Usagawa, Yasushi; Saito, Yoichi; Yamashita, Kiyoshi; Kunieda, Sunao (Konishiroku Photo Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 61277950 A2 19861208 Showa, 51 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1985-119362 19850601.

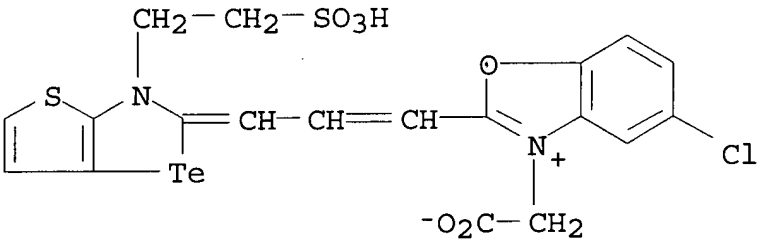
GI For diagram(s), see printed CA Issue.

AB The claimed color **photog**. materials contain tellurazole deriv. sensitizing dyes and pyrazoloazole magenta couplers of the formula I (Z = heterocyclic ring; X = H, substituent released during coupling reaction; R = H, substituent). The **photog**. materials show improved storage stability.

IT **109735-54-8 110160-69-5**
(**photog**. sensitizer dye)

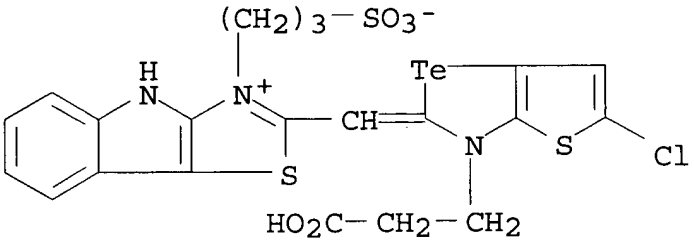
RN 109735-54-8 HCAPLUS

CN Benzoxazolium, 3-(carboxymethyl)-5-chloro-2-[3-[3-(2-sulfoethyl)thieno[2,3-d]tellurazol-2(3H)-ylidene]-1-propenyl]-, inner salt (9CI) (CA INDEX NAME)



RN 110160-69-5 HCAPLUS

CN 4H-Thiazolo[4,5-b]indolium, 2-[[3-(2-carboxyethyl)-5-chlorothieno[2,3-d]tellurazol-2(3H)-ylidene]methyl]-3-(3-sulfopropyl)-, inner salt (9CI) (CA INDEX NAME)



IC ICM G03C007-38
ICS G03C001-12; G03C007-26

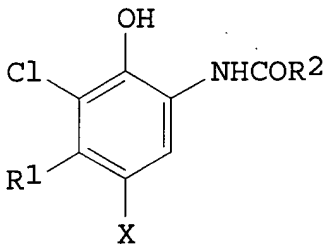
ICA C07D421-06; C07D517-04; C07D517-06

ICI C07D421-06, C07D263-00, C07D293-00; C07D421-06, C07D277-00, C07D293-00

CC **74-2** (Radiation Chemistry, Photochemistry, and

Photographic and Other Reprographic Processes)
ST pyrazoloazole **photog** magenta coupler; tellurazole deriv **photog** sensitizer
IT **Photographic** films
Photographic paper
(color, storage stability improvement of)
IT **Photographic** couplers
(magenta, pyrazoloazoles as)
IT **Photographic** sensitizers
(spectral, tellurazole deriv. dyes as)
IT 97054-41-6 97064-93-2 103913-22-0 104249-47-0 104433-88-7
105371-53-7 106026-43-1 107109-49-9 107746-20-3 110126-59-5
110126-60-8 110126-61-9 110126-62-0 110126-63-1 110126-64-2
(**photog**. magenta coupler)
IT 109060-30-2 109060-31-3 109625-29-8 109735-51-5
109735-54-8 110126-48-2 110126-50-6 110126-66-4
110126-67-5 110126-69-7 110126-70-0 110126-71-1 110126-73-3
110160-69-5
(**photog**. sensitizer dye)
IT 102365-43-5P 108285-81-0P 108286-34-6P 108318-85-0P
108410-79-3P 108464-91-1P 108464-92-2P 108464-93-3P
108464-94-4P 108464-95-5P 108465-25-4P 108465-26-5P
108497-53-6P 110126-65-3P
(prepn. of, as **photog**. sensitizer dye)
IT 75-36-5, Acetyl chloride 78-59-1 80-48-8, Methyl p-toluenesulfonate 333-27-7, Methyl trifluoromethanesulfonate 598-03-8 622-15-1, Diphenylformamidine 3176-77-0 5718-83-2 35080-47-8, 2-(2-Acetanilidovinyl)-3-ethylbenzothiazolium iodide 55425-51-9 75504-95-9 89723-09-1 97425-65-5 97425-67-7 108285-75-2 108285-76-3 108286-01-7 108286-35-7 108410-90-8 108465-18-5 108465-20-9 108465-21-0 108465-23-2 108465-24-3 108465-40-3 108465-41-4 108465-42-5 108497-80-9 108497-85-4 108497-86-5 110126-51-7
(reaction of, **photog**. sensitizer dye from)

L41 ANSWER 13 OF 29 HCAPLUS COPYRIGHT 2002 ACS
1987:506159 Document No. 107:106159 **Silver halide** color **photographic** photosensitive materials. Usagawa, Yasushi; Takahashi, Nensho; Ishikawa, Hisashi; Yamashita, Kiyoshi (Konishiroku Photo Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 61277949 A2 19861208 Showa, 30 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1985-119363 19850601.
GI



I

AB The claimed **photog**. materials contain telluazole deriv. sensitizers and acylaminochlorophenol deriv. cyan couplers I (R1 = C2-4 alkyl; R2 = ballast group; X = H, a group released during coupling reaction). The **photog**. materials show good storage stability.

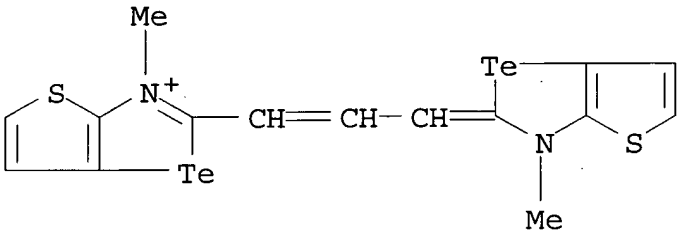
IT **109057-17-2 110126-74-4**
(**photog**. dye sensitizer)

RN 109057-17-2 HCAPLUS

CN Thieno[2,3-d]tellurazolium, 3-methyl-2-[3-(3-methylthieno[2,3-d]tellurazol-2(3H)-ylidene)-1-propenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

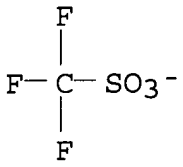
CM 1

CRN 108497-58-1
CMF C15 H13 N2 S2 Te2

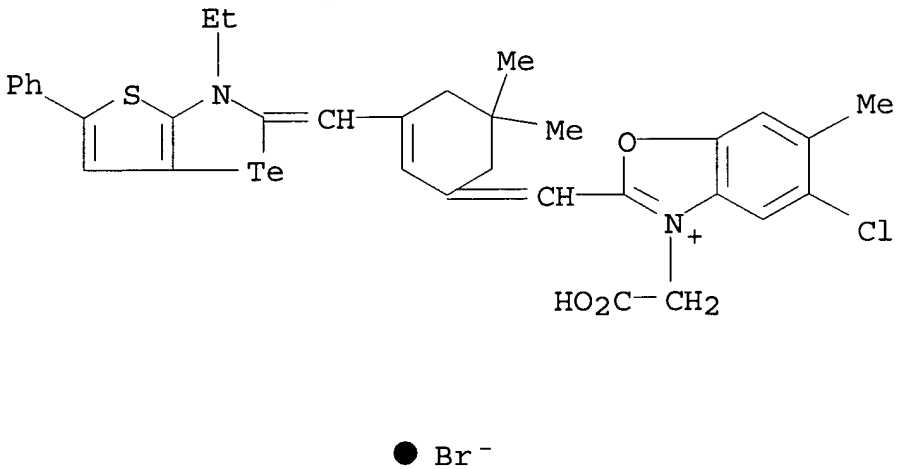


CM 2

CRN 37181-39-8
CMF C F3 O3 S



RN 110126-74-4 HCAPLUS
CN Benzoxazolium, 3-(carboxymethyl)-5-chloro-2-[[3-[(3-ethyl-5-phenylthieno[2,3-d]tellurazol-2(3H)-ylidene)methyl]-5,5-dimethyl-2-cyclohexen-1-ylidene]methyl]-6-methyl-, bromide (9CI) (CA INDEX NAME)



● Br^-

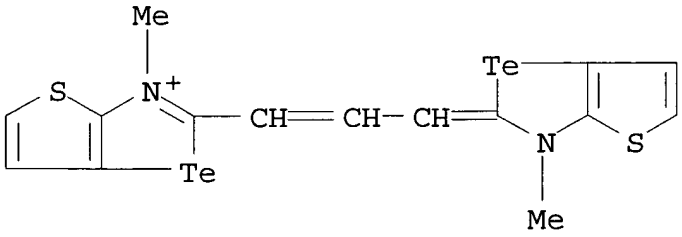
IC ICM G03C007-34
ICS G03C001-12; G03C007-26
ICA C07D421-06; C07D517-04; C07D517-06
ICI C07D421-06, C07D263-00, C07D293-00; C07D421-06, C07D277-00, C07D293-00
CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 41
ST cyan coupler **photog** acylaminophenol deriv; chlorophenol deriv **photog** cyan coupler; phenol deriv **photog** cyan coupler; tellurazole deriv **photog** sensitizing dye
IT **Photographic** films
Photographic paper
(color, storage stability improvement of)
IT **Photographic** couplers
(cyan, acylaminochlorophenol derivs. as)
IT **Photographic** sensitizers
(spectral, tellurazole deriv. dyes as)
IT 93951-12-3 99141-88-5 99817-34-2 101664-25-9 102579-88-4 110126-78-8

(**photog.** cyan coupler)
IT 102365-43-5 108285-70-7 108285-77-4 108285-81-0 108285-83-2
108285-99-0 108286-23-3 108286-26-6 108286-27-7 108286-28-8
108286-34-6 108410-79-3 108464-91-1 108464-93-3 108464-94-4
108464-95-5 108464-98-8 108465-09-4 108465-25-4 108465-26-5
108497-53-6 108497-61-6 108770-21-4 108802-01-3 108802-02-4
109057-17-2 **110126-74-4** 110126-75-5
110126-76-6 110126-77-7
(**photog.** dye sensitizer)
IT 333-27-7, Methyl trifluoromethanesulfonate 598-03-8 622-15-1, Diphenylformamidine 5718-83-2 35080-47-8, 2-(2-Acetanilidovinyl)-3-ethylbenzothiazolium iodide 55425-51-9 70867-59-3 75504-95-9
89723-09-1 95537-84-1 97425-67-7 108286-01-7 108286-35-7
108465-20-9 108465-21-0 108465-23-2 108465-24-3 108465-40-3
108465-41-4 108465-42-5 108465-43-6 108497-57-0 108497-80-9
108497-83-2 108497-85-4 110126-56-2 110126-58-4
(reaction of, **photog.** dye sensitizer from)

L41 ANSWER 14 OF 29 HCAPLUS COPYRIGHT 2002 ACS
1987:487256 Document No. 107:87256 Photothermographic material. Iwagaki, Masaru; Yamashita, Kiyoshi; Takahashi, Nensho; Saito, Yoichi (Konishiroku Photo Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 61281232 A2 19861211 Showa, 34 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1985-123700 19850607.
AB A photothermog. material contains a telluroazole sensitizer in addn. to **Ag halides**, a reducing agent, and a binder.
The photothermog. material shows high sensitivity and good thermal developing characteristics.
IT **109057-17-2P**
(prepn. of, as photothermog. sensitizer)
RN 109057-17-2 HCAPLUS
CN Thieno[2,3-d]tellurazolium, 3-methyl-2-[3-(3-methylthieno[2,3-d]tellurazol-2(3H)-ylidene)-1-propenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

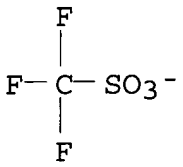
CM 1

CRN 108497-58-1
CMF C15 H13 N2 S2 Te2



CM 2

CRN 37181-39-8
CMF C F3 O3 S

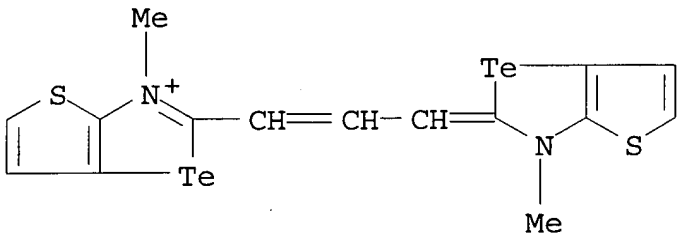


IC ICM G03C001-08
ICS C09B023-00; G03C007-00
CC **74-7** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 41
IT **Photographic** films
(heat-developable, color, diffusion-transfer, contg. telluroazole)
IT **Photographic** sensitizers
(spectral, telluroazoles as)
IT 22257-44-9 87457-72-5 107251-18-3, **Silver bromide** iodide, Ag(Br,I)
(photothermog. material contg.)
IT 102365-43-5P 108286-34-6P 108464-91-1P 108464-93-3P
108464-94-4P 108464-95-5P 108465-25-4P 108465-26-5P
108465-44-7P 108497-53-6P 108497-55-8P 108497-56-9P
109057-17-2P
(prepn. of, as photothermog. sensitizer)

L41 ANSWER 15 OF 29 HCAPLUS COPYRIGHT 2002 ACS
1987:487038 Document No. 107:87038 **Silver halide photographic** photosensitive material. Saito, Yoichi; Kamitakahara, Atsushi; Usagawa, Yasushi; Yamashita, Kiyoshi (Konishiroku Photo Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 61277941 A2 19861208 Showa, 42 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1985-119180 19850601.
AB The claimed **photog**. photosensitive material has a support coated with an electron beam-cured resin layer contg. an inorg. pigment and a layer contg. a telluroazole. The **photog**. material shows excellent storage stability.
IT **109057-17-2**
(**photog**. sensitizer)
RN 109057-17-2 HCAPLUS
CN Thieno[2,3-d]tellurazolium, 3-methyl-2-[3-(3-methylthieno[2,3-d]tellurazol-2(3H)-ylidene)-1-propenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

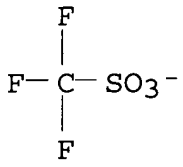
CM 1

CRN 108497-58-1
CMF C15 H13 N2 S2 Te2



CM 2

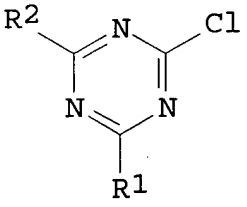
CRN 37181-39-8
CMF C F3 O3 S

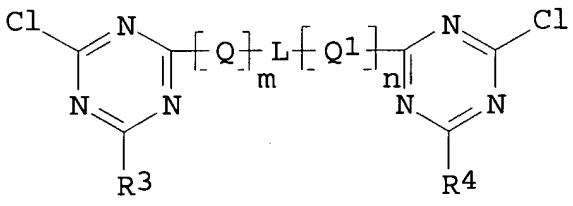


IC ICM G03C001-34
ICS G03C001-87
ICA C07D421-06; C07D517-04; C07D517-06
ICI C07D421-06, C07D263-00, C07D293-00; C07D421-06, C07D277-00, C07D293-00
CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 41
ST paper **photog** resin coated support; telluroazole **photog** sensitizer
IT **Photographic** paper
(color, supports, resin-coated)
IT **Photographic** sensitizers
(spectral, telluroazoles as)
IT 109673-62-3 109711-31-1
(electron beam-cured, **photog**. support coated with)
IT 13463-67-7, Titanium dioxide, uses and miscellaneous
(**photog**. paper support coated with a resin compn. contg.)
IT 97425-69-9 97426-20-5 97426-44-3 102365-43-5 108285-81-0
108286-34-6 108318-85-0 108410-79-3 108464-91-1 108464-92-2
108464-93-3 108464-94-4 108464-95-5 108465-24-3 108465-25-4
108465-26-5 108465-41-4 108465-43-6 108465-44-7 108497-53-6
108497-54-7 108497-55-8 108497-56-9 108802-00-2

109057-17-2 109735-49-1
(**photog**. sensitizer)
IT 108465-40-3P
(prepn. of, as **photog**. sensitizing dye)
IT 70-11-1 75-05-8, Acetonitrile, reactions 78-59-1, Isophorone 103-71-9, Phenylisocyanate, reactions 122-51-0 331-21-5 333-27-7, Methyl trifluoromethanesulfonate 358-23-6, Trifluoromethanesulfonic acid anhydride 598-03-8 622-15-1, Diphenylformamidine 3176-77-0 4169-19-1, N-Acetyl-1,2,3,4-tetrahydroquinoline 5718-83-2, 3-Carboxymethyl rhodanine 7783-09-7, Tellurium hydride 10026-07-0, Tetrachlorotellurium 35080-47-8 55425-51-9 70867-59-3 75504-95-9 89723-09-1 97425-67-7 108285-75-2 108285-76-3 108286-01-7 108286-35-7 108410-90-8 108465-18-5 108465-20-9 108465-21-0 108465-23-2 108465-24-3 108465-42-5 108497-57-0 108497-79-6 108497-80-9 108497-83-2 108497-84-3 108497-86-5 109057-15-0 109057-23-0
(reaction of, **photog**. sensitizer from)

L41 ANSWER 16 OF 29 HCAPLUS COPYRIGHT 2002 ACS
1987:487037 Document No. 107:87037 **Silver halide photographic** photosensitive material. Iwagaki, Masaru; Saito, Yoichi; Ishikawa, Hisashi; Yamashita, Kiyoshi (Konishiroku Photo Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 61277940 A2 19861208 Showa, 34 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1985-119179 19850601.
GI


I

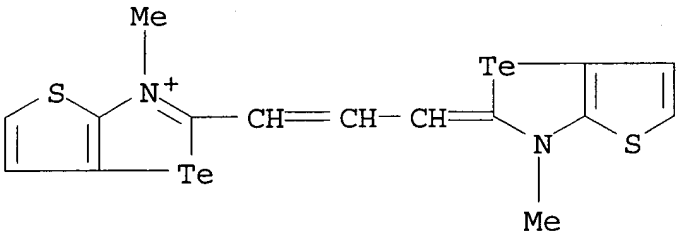

II

AB The claimed **photog**. photosensitive material contains a telluroazole sensitizer and **photog**. layers hardened by I, II (R1 = OH, alkyl, alkoxy, alkylthio, OM, NR5R6, NHCOR7; R2 = Cl, R1; R3, R4 = Cl, OH, alkyl, alkoxy, OM; R5, R6, R7 = H, alkyl, aryl; M = monovalent metal; Q1, Q2 = O, S, NH; L = alkylene, arylene; m, n = 0, 1), or a vinyl sulfone hardening agent. The **photog**. photosensitive material shows good sensitivity and low fog even when rapid drying is used during the prepn. of the photosensitive material.
IT **109057-17-2 109735-54-8**
(**photog**. sensitizer)
RN 109057-17-2 HCAPLUS
CN Thieno[2,3-d]tellurazolium, 3-methyl-2-[3-(3-methylthieno[2,3-d]tellurazol-2(3H)-ylidene)-1-propenyl]-, salt with

trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

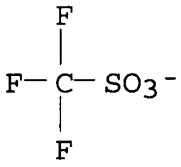
CM 1

CRN 108497-58-1
CMF C15 H13 N2 S2 Te2

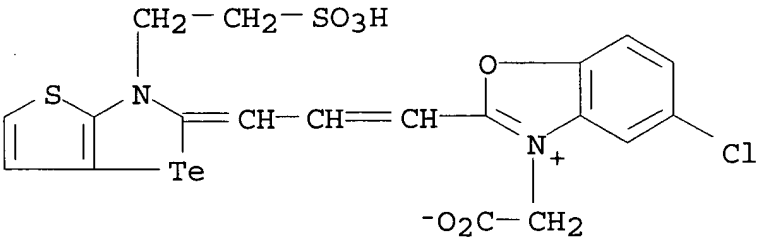


CM 2

CRN 37181-39-8
CMF C F3 O3 S



RN 109735-54-8 HCAPLUS
CN Benzoxazolium, 3-(carboxymethyl)-5-chloro-2-[3-[3-(2-sulfoethyl)thieno[2,3-d]tellurazol-2(3H)-ylidene]-1-propenyl]-, inner salt (9CI) (CA INDEX NAME)

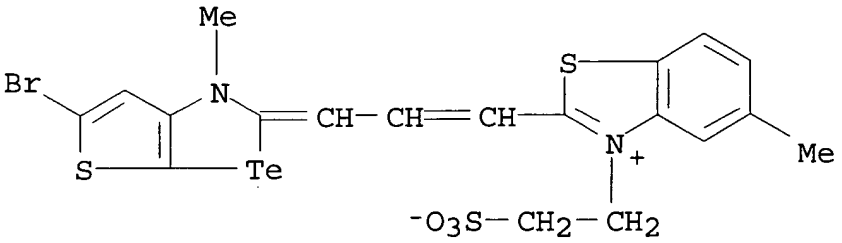


IC ICM G03C001-34
ICS G03C001-30
ICA C07D421-06; C07D517-04; C07D517-06; C07D519-00
ICI C07D421-06, C07D263-00, C07D293-00; C07D421-06, C07D277-00,

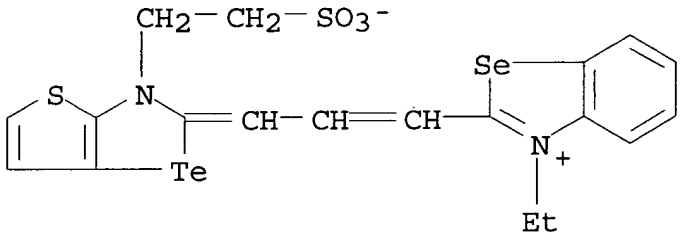
C07D293-00; C07D421-06, C07D231-00, C07D293-00; C07D519-00, C07D517-04
CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 41
ST film **photog** color; sensitizer **photog** telluroazole; vinyl sulfone **photog** hardener; chlorstriazine **photog** hardener; chlorotriazine deriv **photog** hardener
IT **Photographic** hardening agents
(chlorotriazine derivs. and vinyl sulfones as)
IT **Photographic** sensitizers
(spectral, telluroazoles as)
IT 2736-18-7 3088-18-4 32998-00-8 60345-53-1 63226-61-9 101849-30-3
(**photog**. hardening agent)
IT 97426-20-5 97426-35-2 97426-36-3 97426-38-5 97426-39-6 97426-44-3 97426-46-5 97503-65-6 102365-43-5 108286-28-8 108286-34-6 108410-79-3 108464-91-1 108464-93-3 108464-94-4 108464-95-5 108465-25-4 108465-26-5 108465-44-7 108497-53-6 108497-55-8 108497-56-9 108770-16-7 **109057-17-2** 109175-80-6 109735-51-5 109735-52-6 109735-53-7 **109735-54-8**
(**photog**. sensitizer)
IT 122-51-0 333-27-7, Methyltrifluoromethane sulfonate 622-15-1 3176-77-0 5718-83-2 70867-59-3 75504-95-9 97425-67-7 108286-35-7 108465-20-9 108465-21-0 108465-23-2 108465-24-3 108465-40-3 108465-42-5 108465-43-6 108497-57-0 108497-80-9 108497-83-2 108497-84-3 108497-86-5 109057-15-0 109057-23-0 109735-55-9
(reaction of, **photog**. sensitizer from)

L41 ANSWER 17 OF 29 HCAPLUS COPYRIGHT 2002 ACS
1987:449434 Document No. 107:49434 **Photographic** element. Iwagaki, Masaru; Saito, Yoichi; Kunieda, Sunao; Kagawa, Nobuaki (Konishiroku Photo Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 61272735 A2 19861203 Showa, 23 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1985-114747 19850528.
GI For diagram(s), see printed CA Issue.
AB A **photog**. material is comprised of a support and a photosensitive layer consisting of .gtoreq.1 **Ag halide** emulsion layers contg. I, II, III, or IV [R1, R3, R5, R6 = hydrocarbon moiety; R2, R4 = H, hydrocarbon moiety; R7 = H, quaternizing group; X4 and(or) X2 = S, O; G10, G20, G30, G40 = atom required to complete arom. ring; Y- = counter ion; p = O, integer]. Good sensitivity is maintained without adversely affecting fog characteristics.
IT **109175-88-4 109175-89-5**
(**photog**. sensitizer dye)
RN 109175-88-4 HCAPLUS
CN Benzothiazolium, 2-[3-(5-bromo-1-methylthieno[3,2-d]tellurazol-2(1H)-ylidene)-1-propenyl]-5-methyl-3-(2-sulfoethyl)-, inner salt (9CI)

(CA INDEX NAME)



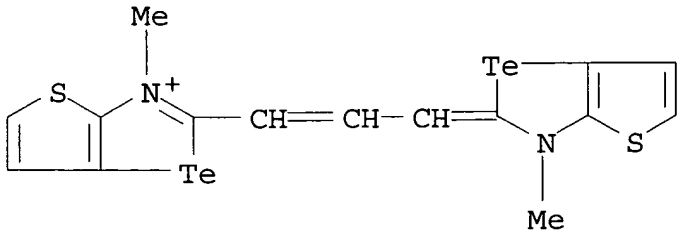
RN 109175-89-5 HCAPLUS
CN Benzoselenazolium, 3-ethyl-2-[3-[3-(2-sulfoethyl)thieno[2,3-d]tellurazol-2(3H)-ylidene]-1-propenyl]-, inner salt (9CI) (CA INDEX NAME)



IT **109057-17-2P**
(prepn. and use of, as **photog**. sensitizer dye)
RN 109057-17-2 HCAPLUS
CN Thieno[2,3-d]tellurazolium, 3-methyl-2-[3-(3-methylthieno[2,3-d]tellurazol-2(3H)-ylidene)-1-propenyl]-, salt with trifluoromethanesulfonic acid (1:1) (9CI) (CA INDEX NAME)

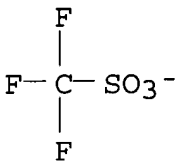
CM 1

CRN 108497-58-1
CMF C15 H13 N2 S2 Te2



CM 2

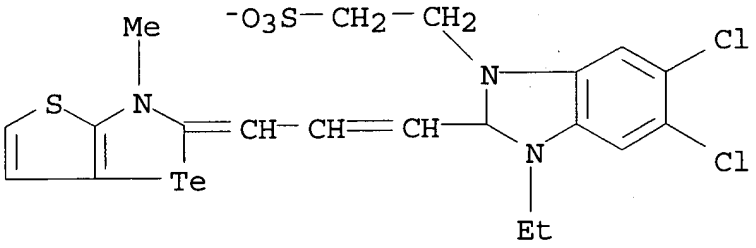
CRN 37181-39-8
CMF C F3 O3 S



IC ICM G03C001-34
ICS G03C001-12
ICA C07D517-04; C07D519-00
ICI C07D519-00, C07D517-04, C07D513-04
CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST film **photog** fog sensitivity tellurazole
IT **Photographic** emulsions
(tellurazole deriv. additive for improved characteristics of)
IT **Photographic** fog inhibitors
Photographic sensitizers
(tellurium in nitrogen-contg. heterocyclic)
IT 108497-72-9 109175-82-8 109175-83-9 109175-84-0
(**photog**. emulsion additive, for fog sepn. and sensitivity improvement)
IT 109175-85-1 109175-86-2 109175-87-3 **109175-88-4** **109175-89-5**
(**photog**. sensitizer dye)
IT 108464-93-3P 108497-57-0P
(prepn. and use of, as **photog**. emulsion additive)
IT **109057-17-2P**
(prepn. and use of, as **photog**. sensitizer dye)

L41 ANSWER 18 OF 29 HCAPLUS COPYRIGHT 2002 ACS
1987:224397 Document No. 106:224397 **Silver halide photographic** photosensitive materials. Kamitakahara, Atsushi; Iwagaki, Masaru; Takahashi, Nensho; Saito, Yoichi (Konishiroku Photo Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 61277942 A2 19861208 Showa, 46 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1985-119181 19850601.
AB The claimed **photog**. materials contain planar **Ag halide** particles with an aspect ratio .gtoreq.3 and a tellurazole deriv.-type sensitizer. The **photog**. materials show good sensitivity, high **image** quality, and good stress (or pressure-) induced fog resistance.
IT **108497-73-0** **108497-74-1**
(**photog**. sensitizer)
RN 108497-73-0 HCAPLUS

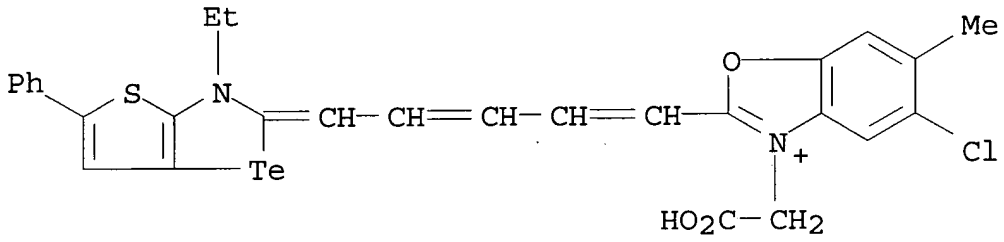
CN 1H-Benzimidazolium, 5,6-dichloro-1-ethyl-2-[3-(3-methylthieno[2,3-d]tellurazol-2(3H)-ylidene)-1-propenyl]-3-(2-sulfoethyl)-, inner salt (9CI) (CA INDEX NAME)



*** FRAGMENT DIAGRAM IS INCOMPLETE ***

RN 108497-74-1 HCAPLUS

CN Benzoxazolium, 3-(carboxymethyl)-5-chloro-2-[5-(3-ethyl-5-phenylthieno[2,3-d]tellurazol-2(3H)-ylidene)-1,3-pentadienyl]-6-methyl-, bromide (9CI) (CA INDEX NAME)



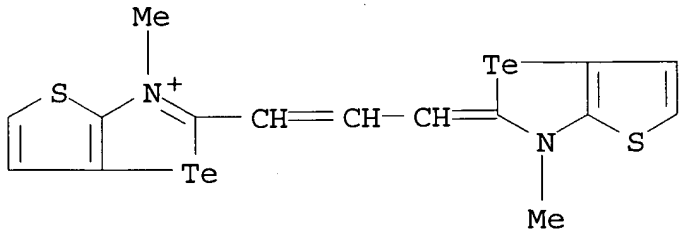
● Br^-

IT **108497-58-1P**

(prepn. of, as **photog.** sensitizer)

RN 108497-58-1 HCAPLUS

CN Thieno[2,3-d]tellurazolium, 3-methyl-2-[3-(3-methylthieno[2,3-d]tellurazol-2(3H)-ylidene)-1-propenyl]- (9CI) (CA INDEX NAME)

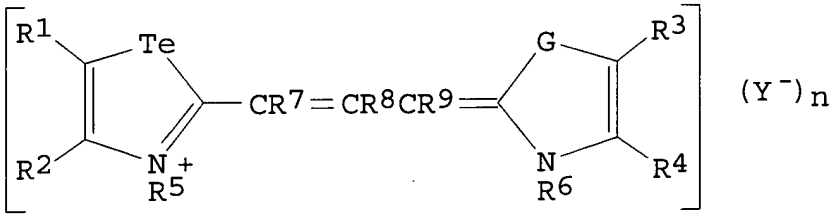


IC ICM G03C001-34
ICS G03C001-02
ICA C07D421-06; C07D517-04; C07D517-06
ICI C07D421-06, C07D231-00, C07D293-00; C07D421-06, C07D263-00, C07D293-00; C07D421-06, C07D277-00, C07D293-00
CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST **silver halide photog** emulsion; tellurazole deriv **photog** sensitizer
IT **Photographic** emulsions
(**silver halide** particle shapes in, sensitivity and pressure-induced fog resistance in relation to)
IT **Photographic** sensitizers
(tellurazole derivs. as)
IT 97425-43-9 97425-46-2 97425-50-8 97425-53-1 97425-56-4
97425-71-3 97425-73-5 97425-87-1 97425-89-3 97426-03-4
97426-08-9 97426-16-9 97426-20-5 97426-30-7 97426-44-3
97426-48-7 108285-77-4 108410-86-2 108497-60-5 108497-61-6
108497-62-7 108497-63-8 108497-64-9 108497-65-0 108497-66-1
108497-67-2 108497-68-3 108497-69-4 108497-70-7 108497-71-8
108497-72-9 **108497-73-0 108497-74-1**
108497-75-2 108497-76-3
(**photog**. sensitizer)
IT 102365-43-5P 108285-81-0P 108286-34-6P 108318-85-0P
108410-79-3P 108464-91-1P 108464-92-2P 108464-93-3P
108464-94-4P 108464-95-5P 108465-24-3P 108465-25-4P
108465-26-5P 108465-40-3P 108465-41-4P 108465-43-6P
108497-53-6P 108497-54-7P 108497-55-8P 108497-56-9P
108497-57-0P **108497-58-1P** 108497-59-2P
(prepn. of, as **photog**. sensitizer)
IT 70-11-1, .alpha.-Bromoacetophenone 75-05-8, reactions 78-59-1, Isophorone 103-72-0, Phenyl isothiocyanate 122-51-0, Ethyl orthoformate 333-27-7, Methyl trifluoromethanesulfonate 622-15-1, Diphenylformamidine 3176-77-0 4169-19-1, N-Acetyl-1,2,3,4-tetrahydroquinoline 5657-49-8 5718-83-2 7783-09-7, Tellurium hydride 10026-07-0, Tellurium tetrachloride 13053-81-1 15426-14-9 28553-80-2 43061-75-2, 2-(2-Acetanilidovinyl)-3-ethylbenzothiazolium 55425-51-9 70867-59-3 75504-95-9 89723-09-1, 2-Methylbenzotellurazole 97425-67-7, 2,3,5-Trimethylbenzotellurazolium trifluoromethanesulfonate 106532-59-6 108285-76-3, 2-(2-Acetanilidovinyl)-3-(2-hydroxyethyl)benzothiazolium iodide 108286-01-7 108286-35-7, 3-[5-Chloro-2-(2-methylthio-1-propenyl)-3-benzothiazolio]propanesulfonic acid inner salt 108465-18-5, 4-Acetanilidomethylene-1,2,3,4-tetrahydropyrido[2,1-b]benzotellurazolium iodide 108465-20-9 108465-21-0 108465-24-3 108465-40-3 108465-41-4 108465-42-5 108465-43-6, 5-Fluoro-2-methylbenzotellurazole 108497-54-7 108497-78-5 108497-79-6, 2-(3-Hydroxybutyl)benzotellurazole 108497-80-9, 2-(2-Acetanilidovinyl)-3-ethyl-6-methylbenzothiazolium iodide 108497-81-0 108497-83-2, 2,3-Dimethylthieno[2,3-d]tellurazolium

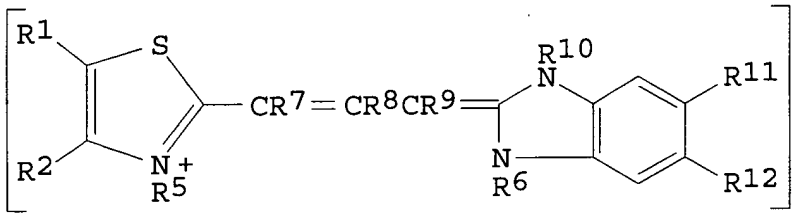
trifluoromethanesulfonate 108497-85-4, 2-Acetanilidovinyl-5-fluoro-3-methylbenzotellurazolium trifluoromethanesulfonate 108497-86-5 108497-87-6
(reaction of, **photog**. sensitizer from)

L41 ANSWER 19 OF 29 HCAPLUS COPYRIGHT 2002 ACS
1987:224395 Document No. 106:224395 **Silver halide photographic** photosensitive materials. Saito, Yoichi; Kagawa, Nobuaki; Takahashi, Nensho; Iwagaki, Masaru (Konishiroku Photo Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 61281233 A2 19861211 Showa, 26 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1985-123669 19850607.

GI



I



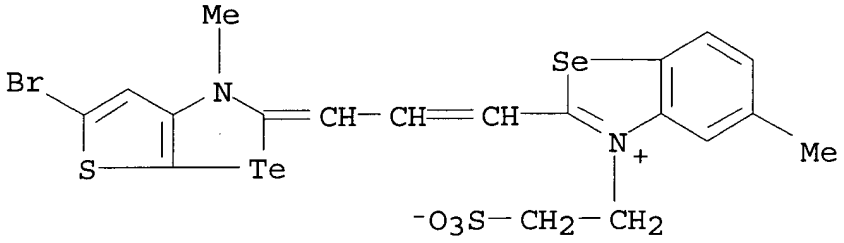
II

AB The claimed **photog**. materials contain .gtoreq.1 sensitizer dye of the formula I (R1-R4 = H, alkyl, aryl; R1 and R2 can not be H simultaneously; R1R2 and R3R4 combination may form 5- or 6-membered arom. ring; R5, R6 = substituent; R7, R9 = H, alkyl, alkoxy, aryloxy, aryl, aralkyl, CN; R5R7, R6R9 or R7R9 combination may complete 5- or 6-membered ring; R8 = H, alkyl, aralkyl, aryl, heterocyclyl, CN, amino, alkylthio, arylthio, alkoxy, aryloxy, acidic ring; G = S, Se; Y- = anion; n = 0, integer) and .gtoreq.1 sensitizer dye of the formula II (R1, R2, R5-R9, y-, n = same as in I; R10 = substituent; R11, R12 = H, halo, CN, tribluoroalkyl, trifluoroalkylsulfonyl).

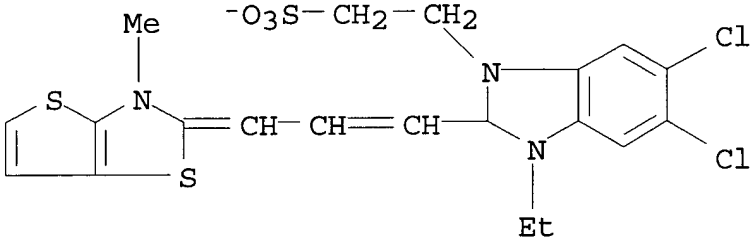
IT **108465-52-7 108465-56-1**
(**photog**. supersensitizer compns. contg.)

RN 108465-52-7 HCAPLUS

CN Benzoselenazolium, 2-[3-(5-bromo-1-methylthieno[3,2-d]tellurazol-2(1H)-ylidene)-1-propenyl]-5-methyl-3-(2-sulfoethyl)-, inner salt (9CI) (CA INDEX NAME)



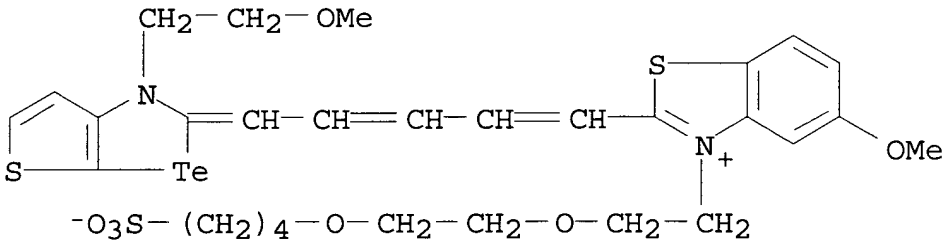
RN 108465-56-1 HCAPLUS
CN 1H-Benzimidazolium, 5,6-dichloro-1-ethyl-2-[2-(3-methylthieno[2,3-d]thiazol-2(3H)-ylidene)-1-propenyl]-3-(2-sulfoethyl)-, inner salt (9CI) (CA INDEX NAME)



*** FRAGMENT DIAGRAM IS INCOMPLETE ***
IC ICM G03C001-28
ICA C07D421-06; C07D517-04
ICI C07D421-06, C07D277-00, C07D293-00
CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST supersensitizer **photog** tellurazolium dye; thiazolium dye **photog** supersensitizer
IT Onium compounds
(mixt. of tellurazo- and thiazo-, **photog**. sensitizer from)
IT **Photographic** films
(supersensitized)
IT **Photographic** sensitizers
(super-, tellurazolium dye-thiazolium dye mixts. as)
IT 34717-19-6 40387-63-1 60760-28-3 108285-72-9 108465-26-5
108465-45-8 108465-46-9 108465-48-1 108465-49-2 108465-50-5
108465-51-6 **108465-52-7** 108465-53-8 108465-54-9
108465-55-0 **108465-56-1** 108506-80-5 108506-81-6
(**photog**. supersensitizer compns. contg.)
IT 102365-43-5P 108285-81-0P 108465-26-5P 108465-44-7P
(prepn. of, as **photog**. sensitizer dye)
IT 333-27-7, Methyl trifluoromethanesulfonate 622-15-1 28553-80-2
35080-47-8, 2-(2-Acetanilido vinyl)-3-ethylbenzothiazolium iodide
56405-37-9 70867-59-3 89723-09-1 97425-67-7 108286-01-7
108286-35-7 108465-40-3 108465-43-6

(reaction of, **photog**. sensitizer dye from)

L41 ANSWER 20 OF 29 HCAPLUS COPYRIGHT 2002 ACS
1987:205119 Document No. 106:205119 **Photographic** element. Takahashi, Nensho; Ishikawa, Hisashi; Usagawa, Yasushi; Kagawa, Nobuaki (Konishiroku Photo Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 61275835 A2 19861205 Showa, 23 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1985-118471 19850531.
AB A **photog**. element is comprised of a support and .gtoreq.1 **Ag halide** emulsion layer contg. a sensitizer dye based on a 5-membered heterocycle contg. Te and N with the latter bonded to (CH2CH2O)k(CH2)jSO3M [j = 1-18; k = 1-4; M = H, alkali metal, org. ammonium or electron].
IT **108286-00-6**
(sensitizer dye, **photog**. films contg.)
RN 108286-00-6 HCAPLUS
CN Benzothiazolium, 5-methoxy-2-[5-[1-(2-methoxyethyl)thieno[3,2-d]tellurazol-2(1H)-ylidene]-1,3-pentadienyl]-3-[2-[2-(4-sulfobutoxy)ethoxy]ethyl]-, inner salt (9CI) (CA INDEX NAME)

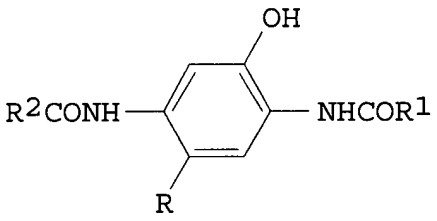


IC ICM G03C001-12
ICA C07D293-04; C07D293-10
CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
ST film **photog** sensitizer dye; tellurium heterocycle sensitizer dye
IT **Photographic** sensitizers
(nitrogen- and tellurium-heterocycle)
IT 108285-81-0P
(prepn. and use of, as **photog**. sensitizer dye)
IT 108285-80-9 108285-82-1 108285-83-2 108285-84-3 108285-85-4 108285-86-5 108285-87-6 108285-88-7 108285-89-8 108285-90-1 108285-91-2 108285-92-3 108285-93-4 108285-95-6 108285-96-7 108285-97-8 108285-99-0 **108286-00-6**
(sensitizer dye, **photog**. films contg.)

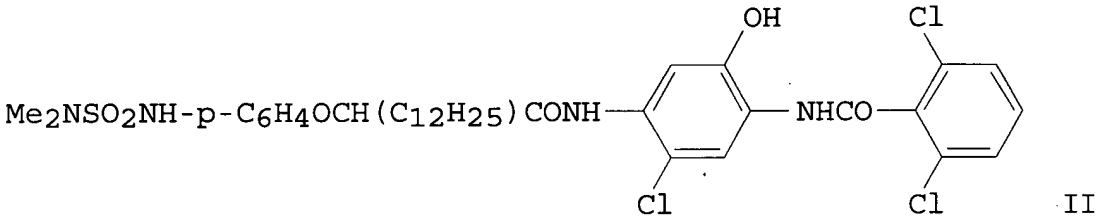
L41 ANSWER 21 OF 29 HCAPLUS COPYRIGHT 2002 ACS
1984:638058 Document No. 101:238058 Preparation of **photographic** photosensitive materials. (Konishiroku Photo Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 59009658 A2 19840119 Showa, 15 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP

1982-119025 19820707.

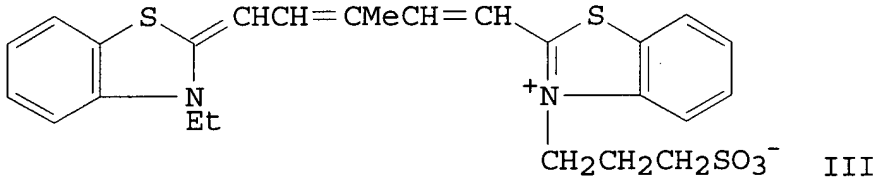
GI



I



II



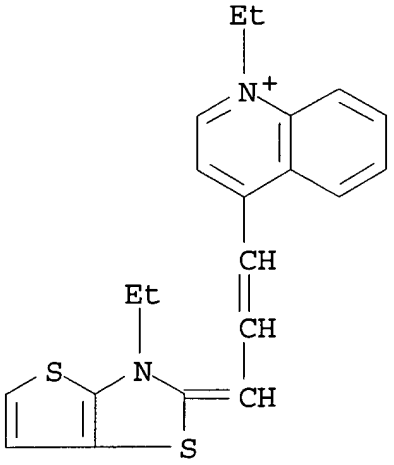
III

AB In prepg. **Ag halide** color **photog.** photosensitive materials contg. cyan coupler I (R = group released during coupling reaction; R1, R2 = alkyl, aryl alkenyl, amino), **Ag halide** particles in the emulsion in which the coupler I is added is sensitized with a sensitizer dye and after the chem. ripening of the emulsion and before the coating of the emulsion, addnl. amt. (0.05-10 times the original amt.) of the sensitizer dye is added. The method improves the stability of the emulsion. Thus, a cyan coupler II dispersion was added to a chem. ripened Ag(Br,I) emulsion contg. III 2 .times. 10-5 mol/mol-**Ag halide**, and III 4 .times. 10-5 mol/mol.-**Ag halide** was added to the emulsion. The sensitivity of the **photog.** paper prepd. by coating the emulsion 6 h after the prepn. was almost same as the paper prepd. immediately.

IT **93446-65-2**
(**photog.** sensitizer dye, for cyan coupler-contg. emulsions)

RN 93446-65-2 HCAPLUS

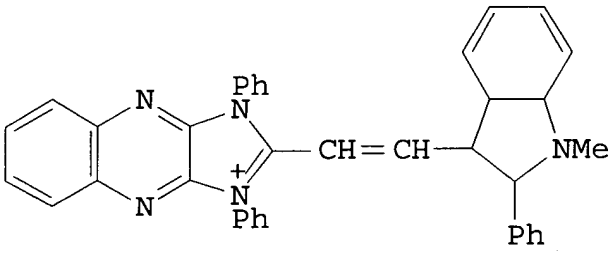
CN Quinolinium, 1-ethyl-4-[3-(3-ethylthieno[2,3-d]thiazol-2(3H)-ylidene)-1-propenyl]-, chloride (9CI) (CA INDEX NAME)



● Cl^-

IC G03C007-26; G03C001-08
CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
IT **Photographic** emulsions
(contg. cyan coupler, dye-sensitization of)
IT **Photographic** couplers
(cyan, bis(acylamino)phenol derivs. as, dye sensitization of emulsions contg.)
IT **Photographic** sensitizers
(methine dyes as, for cyan coupler-contg. emulsions, addn. of)
IT 77317-17-0 82684-62-6 88725-32-0 93446-60-7 93446-61-8
(**photog**. cyan coupler, dye sensitization of emulsions contg.)
IT 72845-30-8 93446-62-9 93446-63-0 93446-64-1 **93446-65-2**
(**photog**. sensitizer dye, for cyan coupler-contg. emulsions)

L41 ANSWER 22 OF 29 HCAPLUS COPYRIGHT 2002 ACS
1980:648193 Document No. 93:248193 Ultrasonography in forming a visible **image** in a **silver halide photographic** element. Rosenfeld, Robert B. (Eastman Kodak Co., USA). U.S. US 4223082 19800916, 51 pp. Cont.-in-part of U.S. Ser. No. 770,323, abandoned. (English). CODEN: USXXAM. APPLICATION: US 1979-31083 19790418.
GI



$C_7H_7SO_3^-$ I

AB Improved ultrasonog. process provides high resoln. ultrasonographs more rapidly and uses ultrasonic radiation of lower energy levels which does not damage testing material and does not cause cavitation stimulated luminescence, comprises imagewise exposure of **Ag halide photog.** element to ultrasonic radiation (>100 W-s/cm2), exposure to electromagnetic radiation,and **photog.** processing. Thus, poly(ethylene terephthalate support) coated with **AgBr** emulsion contg. desensitized dye I 1 .times. 10-4 mol/mol Ag to give 3.2 g/m2 and gelatin coverage 2.7 g/m2, was immersed in sonog. sensitometer (rectangular plastic vessel contg. H2O reservoir and 12 ultrasonic transducers each having a circular emitting surface of 0.785 cm2 and arranged on the bottom; power levels supplied to them increased by factor of 2 in going from 1 to another; ultrasonic frequency supplied to transducers was 5 MHz) for 15s, imagewise exposed to ultrasonic energy for 10s, exposed uniformly to light 10s, processed 3 min in D-19 developer, fixed, washed, and dried to give an **image** of very good sensitivity.

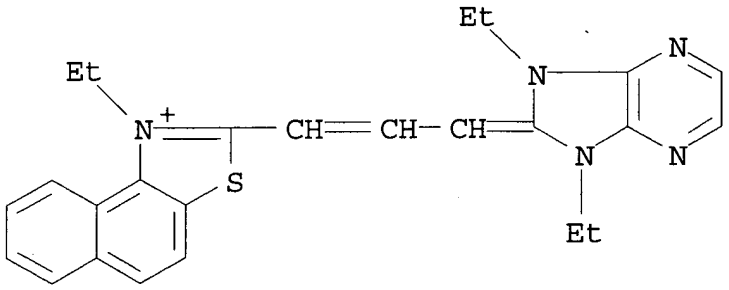
IT **75876-94-7**
(**silver halide photog.** emulsion contg., for ultrasonog. **image** formation in)

RN 75876-94-7 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[3-(1,3-diethyl-1,3-dihydro-2H-imidazo[4,5-b]pyrazin-2-ylidene)-1-propenyl]-1-ethyl-, perchlorate (9CI) (CA INDEX NAME)

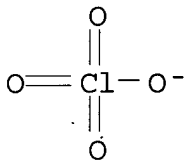
CM 1

CRN 75876-93-6
CMF C25 H26 N5 S



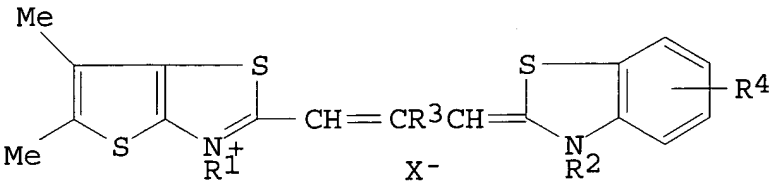
CM 2

CRN 14797-73-0
CMF Cl O4



IC G03C005-04; G03C005-24; C03C005-26
NCL 430003000
CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic Processes)
ST ultrasonog **image** formation **photog** film
IT Sound and Ultrasound, chemical and physical effects
(on **photog**. emulsion, **image** formation in)
IT **Photographic** films
(ultasonog.)
IT 41435-81-8
(**silver halide photog**. emulsion contg., for ultrasonog. **image** formation)
IT 1613-31-6 31037-84-0 75876-92-5 **75876-94-7**
(**silver halide photog**. emulsion contg., for ultrasonog. **image** formation in)

L41 ANSWER 23 OF 29 HCAPLUS COPYRIGHT 2002 ACS
1978:538374 Document No. 89:138374 5,6-Dimethylthieno[2,3-d]thiazolocarbocyanine dyes as spectral sensitizers of **silver halide** emulsions in the red region.
Abramenko, P. I.; Zhiryakov, V. G.; Priklonskikh, G. I. (All-Union Scientific-Research Institute of the Photographic-Chemical Industry, USSR). U.S.S.R. SU 615110 19780715 From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1978, 55(26), 84. (Russian). CODEN: URXXAF. APPLICATION: SU 1977-2437286 19770103.
GI



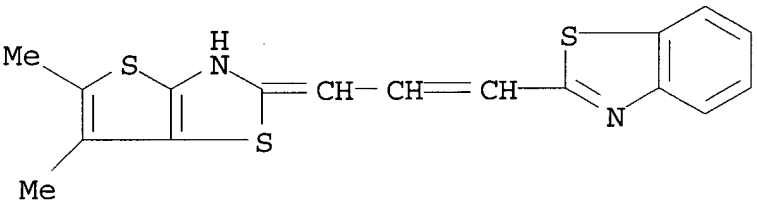
I

AB The title dyes I (R1, R2 = C1-4 alkyl or sulfoalkyl; R3 = C1-4 alkyl; R4 = H, C1-4 alkyl, MeO, or is benzo group; X- = anion or is absent when R1 and/or R2 = sulfoalkyl) are used as spectral sensitizers for **Ag halide** emulsions in the red region.

IT **67709-04-0D**, derivs., salts
(**photog.** spectral sensitizers, for red region)

RN 67709-04-0 HCAPLUS

CN Benzothiazole, 2-[3-(5,6-dimethylthieno[2,3-d]thiazol-2(3H)-ylidene)-1-propenyl]-, conjugate monoacid (9CI) (CA INDEX NAME)



IC C09B023-06

CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic Processes)
Section cross-reference(s): 40

ST carbocyanine dye spectral sensitizer **photog**; methylthienothiazolocarbocyanine dye spectral sensitizer **photog**

IT **Photographic** sensitizers
(dimethylthienothiazolocarbocyanine dyes as, for red region)

IT **67709-04-0D**, derivs., salts
(**photog.** spectral sensitizers, for red region)

L41 ANSWER 24 OF 29 HCAPLUS COPYRIGHT 2002 ACS

1978:201017 Document No. 88:201017 Sensitizer dyes for direct positive **silver halide photographic** emulsions.
Tanaka, Akira; Yoshida, Akio (Mitsubishi Paper Mills, Ltd., Japan).

Jpn. Kokai Tokkyo Koho JP 52133210 19771108 Showa, 7 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1976-50357 19760501.

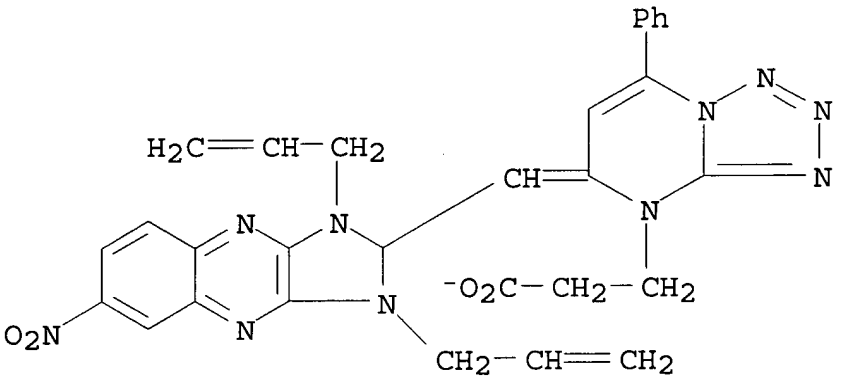
GI For diagram(s), see printed CA Issue.

AB Direct-pos. **Ag halide photog.** emulsions contain .gtoreq.1 compd. of the general structure I (Z = group of atoms required to complete a 5- or 6-membered heterocycle; Z' = N, methyne, substituted methyne; R,R' = alkyl, alkenyl, aralkyl, aryl; R2, R3, R4 = H, alkyl aralkyl, aryl; X- = acid anion) as the spectral sensitizer. Thus, thiourea dioxide 0.3 mg/mol Ag was added to a Ag(Br,I) emulsion (**AgI** .apprxeq.3 mol%), the emulsion was ripened 1 h at 60.degree., KAuCl4 3.0 mg/mol Ag was added to the emulsion, the emulsion was reheated at 60.degree. for 1 h, then a sensitizer dye II (in MeOH) 300 and Pinakryptol Yellow 200 mg/mol Ag were added to the emulsion, and the emulsion was coated on a cellulose triacetate film support to give a direct-pos. **photog**. film. The film was sensitometrically exposed and developed to give a relative sensitivity, .gamma.-value, Dmax, and Dmin of 384, 5.0, 3.21, and 0.03, resp., vs 100, 5.0, 3.30, and 0.03, resp., for a II-free control.

IT **66543-41-7 66543-42-8 66543-43-9 66543-47-3**
(**photog**. sensitizer, for direct-pos. emulsions)

RN 66543-41-7 HCAPLUS

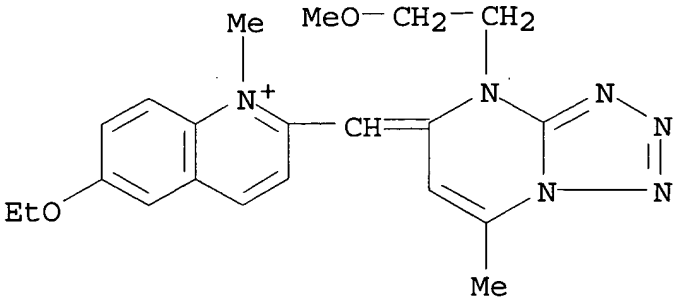
CN 1H-Imidazo[4,5-b]quinoxalinium, 2-[[4-(2-carboxyethyl)-7-phenyltetrazolo[1,5-a]pyrimidin-5(4H)-ylidene]methyl]-6-nitro-1,3-di-2-propenyl-, inner salt (9CI) (CA INDEX NAME)



*** FRAGMENT DIAGRAM IS INCOMPLETE ***

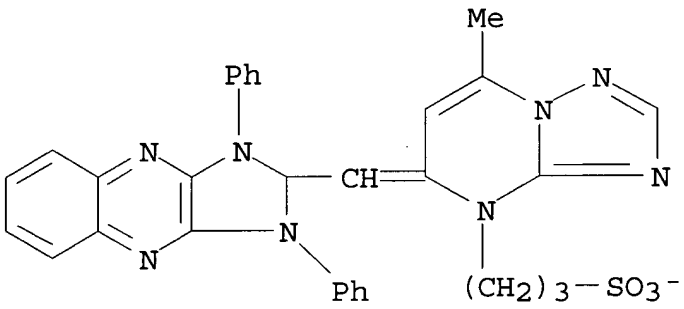
RN 66543-42-8 HCAPLUS

CN Quinolinium, 6-ethoxy-2-[[4-(2-methoxyethyl)-7-methyltetrazolo[1,5-a]pyrimidin-5(4H)-ylidene]methyl]-1-methyl-, iodide (9CI) (CA INDEX NAME)

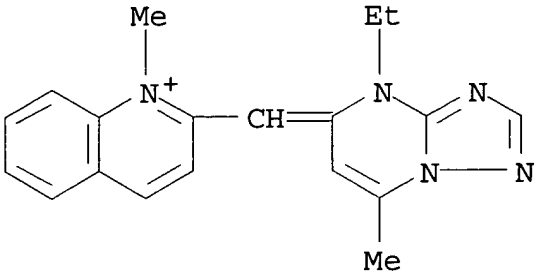


● I^-

RN 66543-43-9 HCAPLUS
CN 1H-Imidazo[4,5-b]quinoxalinium, 2-[[7-methyl-4-(3-sulfopropyl)[1,2,4]triazolo[1,5-a]pyrimidin-5(4H)-ylidene]methyl]-1,3-diphenyl-, inner salt (9CI) (CA INDEX NAME)



*** FRAGMENT DIAGRAM IS INCOMPLETE ***
RN 66543-47-3 HCAPLUS
CN Quinolinium, 2-[(4-ethyl-7-methyl[1,2,4]triazolo[1,5-a]pyrimidin-5(4H)-ylidene)methyl]-1-methyl-, iodide (9CI) (CA INDEX NAME)



⊛ I^-

IC G03C001-485
CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic Processes)
ST direct pos **photog** emulsion sensitizer; triazolopyrimidine sensitizer **photog** emulsion
IT **Photographic** sensitizers
(triazolopyrimidine derivs. as, for direct-pos. emulsions)
IT 66543-40-6 **66543-41-7 66543-42-8**
66543-43-9 66543-44-0 66543-46-2 **66543-47-3**
66573-71-5
(**photog**. sensitizer, for direct-pos. emulsions)

L41 ANSWER 25 OF 29 HCAPLUS COPYRIGHT 2002 ACS
1977:493498 Document No. 87:93498 **Photographic** emulsions containing methine dyes having a 1H-imidazo[4,5-b]pyrazine nucleus. Gaugh, Wilbur Seth; Heseltine, Donald Warren; Sturmer, David Michael; Freeman, John Paul (Eastman Kodak Co., USA). U.S. US 4007170 19770208, 14 pp. Division of U.S. 3,936,308. (English). CODEN: USXXAM. APPLICATION: US 1974-483336 19740626.
GI For diagram(s), see printed CA Issue.
AB The methine dyes I, II, and III (R1, R2, R3 = alkyl, alkenyl, alkaryl, aryl; R4, R5 = alkyl, alkenyl, alkaryl, aryl, alkoxy, halo, cyano; X- = acid anion; Z = nonmetallic atoms required to complete a 5-6 member heterocyclic ring of the type used in cyanine dyes; Z1 = nonmetallic atoms required to complete a 5-6 member heterocyclic ring of the type used in merocyanine dyes; n = 1-4; m = 1-2; p = 1-3) are used as spectral sensitizers for **Ag halide photog**. emulsions. Thus, a Au- and S-sensitized Ag(Br,I) (2.5 mol % I) emulsion (0.2 .mu. cubic grains) was spectrally sensitized with 1,1',3,3'-tetraethyl-5,5',6,6'-tetramethyl-1H-imidazo[4,5-b]pyrazinocarbocyanine perchlorate at 10-4 mol/mol Ag, coated on a cellulose acetate support, sensitometrically exposed through a wedge spectrograph and a continuous step wedge using a Wratten 16 filter (minus blue), developed in a hydroquinone developer, fixed, washed, and dried to show a sensitizing range, sensitizing max., relative 365 line speed,

relative minus blue speed, and fog of 500-625 nm, 600 nm, 229, 631, and 0.35, resp., vs.-, 540 nm, 214, 100, and 0.06, resp., for a control spectrally sensitized with 3-carboxymethyl-5-[(3-methyl-2-thiazolidinylidene)-1-methylethylidene]rhodamine.

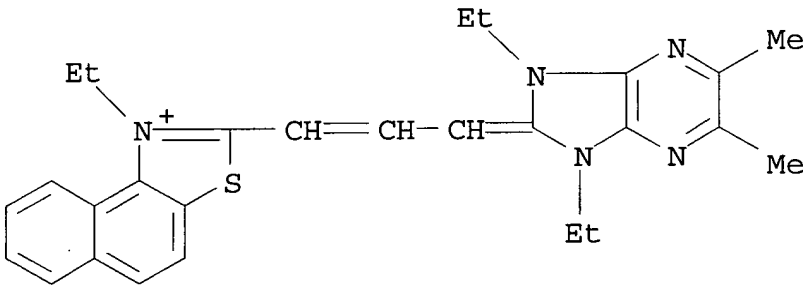
IT **55199-35-4 57038-17-2 57038-19-4 57038-25-2 57038-29-6**
(**photog**. spectral sensitizer)

RN 55199-35-4 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[3-(1,3-diethyl-1,3-dihydro-5,6-dimethyl-2H-imidazo[4,5-b]pyrazin-2-ylidene)-1-propenyl]-1-ethyl-, perchlorate (9CI) (CA INDEX NAME)

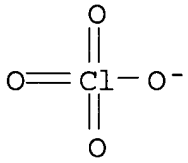
CM 1

CRN 55199-34-3
CMF C27 H30 N5 S



CM 2

CRN 14797-73-0
CMF Cl O4



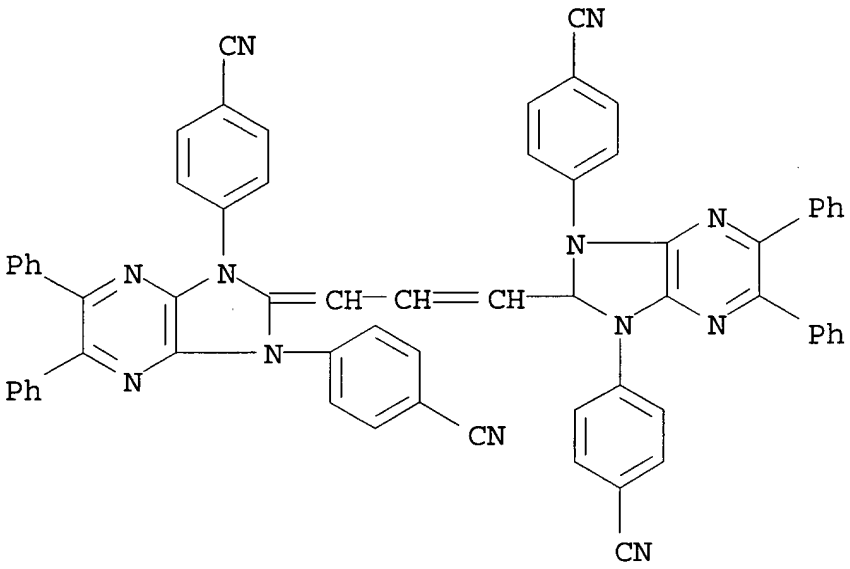
RN 57038-17-2 HCAPLUS

CN 1H-Imidazo[4,5-b]pyrazinium, 2-[3-[1,3-bis(4-cyanophenyl)-1,3-dihydro-5,6-diphenyl-2H-imidazo[4,5-b]pyrazin-2-ylidene]-1-propenyl]-1,3-bis(4-cyanophenyl)-5,6-diphenyl-, perchlorate (9CI) (CA INDEX NAME)

CM 1

CRN 57038-16-1

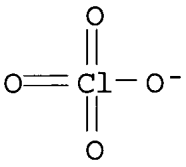
CMF C65 H39 N12



*** FRAGMENT DIAGRAM IS INCOMPLETE ***

CM 2

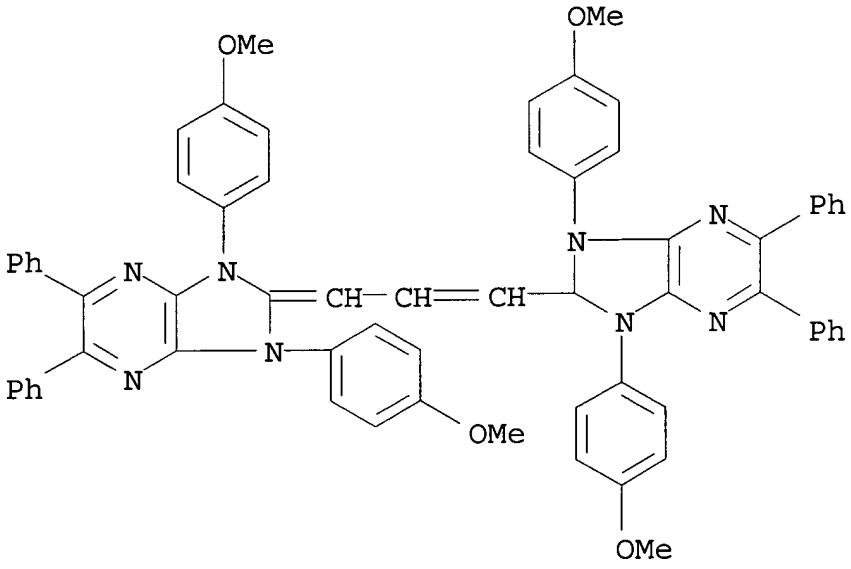
CRN 14797-73-0
CMF Cl O4



RN 57038-19-4 HCAPLUS
CN 1H-Imidazo[4,5-b]pyrazinium, 2-[3-[1,3-dihydro-1,3-bis(4-methoxyphenyl)-5,6-diphenyl-2H-imidazo[4,5-b]pyrazin-2-ylidene]-1-propenyl]-1,3-bis(4-methoxyphenyl)-5,6-diphenyl-, perchlorate (9CI) (CA INDEX NAME)

CM 1

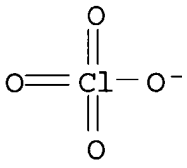
CRN 57038-18-3
CMF C65 H51 N8 O4



*** FRAGMENT DIAGRAM IS INCOMPLETE ***

CM 2

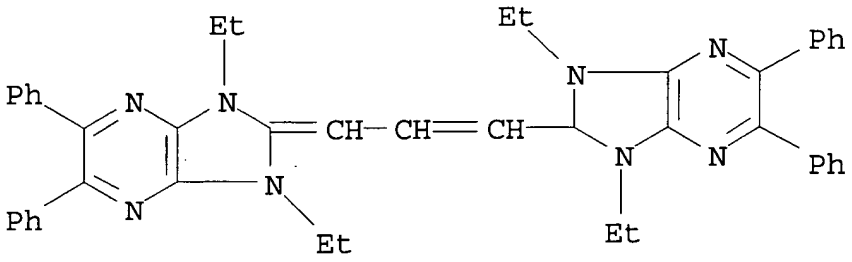
CRN 14797-73-0
CMF Cl O4



RN 57038-25-2 HCAPLUS
CN 1H-Imidazo[4,5-b]pyrazinium, 2-[3-(1,3-diethyl-1,3-dihydro-5,6-diphenyl-2H-imidazo[4,5-b]pyrazin-2-ylidene)-1-propenyl]-1,3-diethyl-5,6-diphenyl-, perchlorate (9CI) (CA INDEX NAME)

CM 1

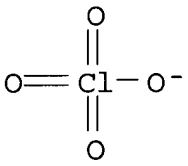
CRN 57038-24-1
CMF C45 H43 N8



*** FRAGMENT DIAGRAM IS INCOMPLETE ***

CM 2

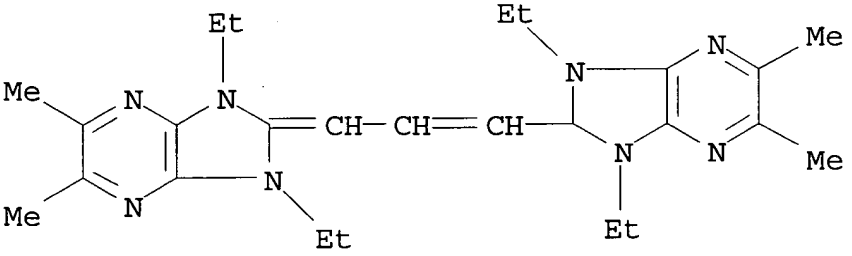
CRN 14797-73-0
CMF Cl O4



RN 57038-29-6 HCAPLUS
CN 1H-Imidazo[4,5-b]pyrazinium, 2-[3-(1,3-diethyl-1,3-dihydro-5,6-dimethyl-2H-imidazo[4,5-b]pyrazin-2-ylidene)-1-propenyl]-1,3-diethyl-5,6-dimethyl-, perchlorate (9CI) (CA INDEX NAME)

CM 1

CRN 57038-28-5
CMF C25 H35 N8

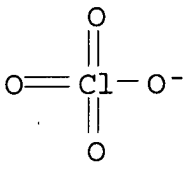


*** FRAGMENT DIAGRAM IS INCOMPLETE ***

CM 2

CRN 14797-73-0

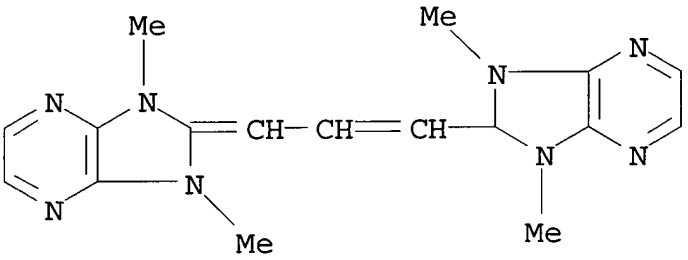
CMF Cl O4



IT **57038-30-9P 57038-49-0P 57038-58-1P**
57038-61-6P 57038-66-1P
(prepn. of)
RN 57038-30-9 HCAPLUS
CN 1H-Imidazo[4,5-b]pyrazinium, 2-[3-(1,3-dihydro-1,3-dimethyl-2H-imidazo[4,5-b]pyrazin-2-ylidene)-1-propenyl]-1,3-dimethyl-, salt with 4-methylbenzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

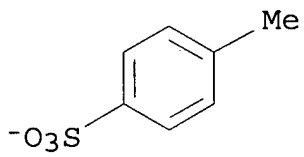
CRN 51943-67-0
CMF C17 H19 N8



*** FRAGMENT DIAGRAM IS INCOMPLETE ***

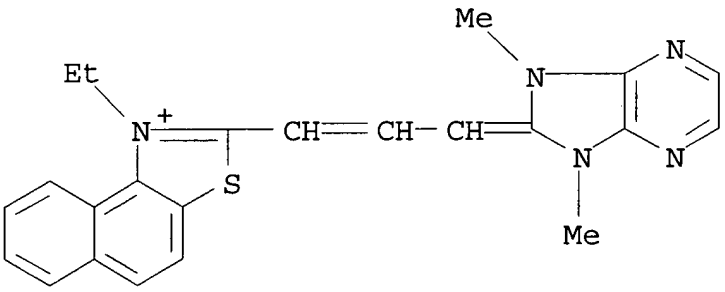
CM 2

CRN 16722-51-3
CMF C7 H7 O3 S



RN 57038-49-0 HCAPLUS
CN Naphtho[1,2-d]thiazolium, 2-[3-(1,3-dihydro-1,3-dimethyl-2H-imidazo[4,5-b]pyrazin-2-ylidene)-1-propenyl]-1-ethyl-, iodide (9CI)

(CA INDEX NAME)

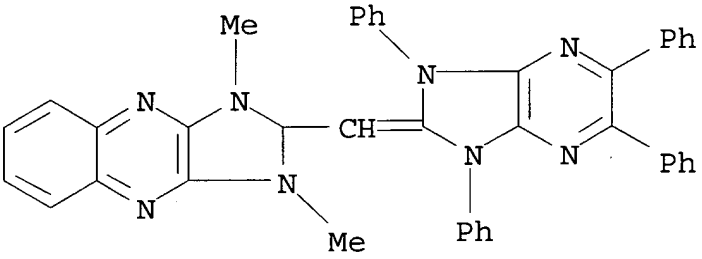


● I^-

RN 57038-58-1 HCAPLUS
CN 1H-Imidazo[4,5-b]quinoxalinium, 2-[(1,3-dihydro-1,3,5,6-tetraphenyl-2H-imidazo[4,5-b]pyrazin-2-ylidene)methyl]-1,3-dimethyl-, perchlorate (9CI) (CA INDEX NAME)

CM 1

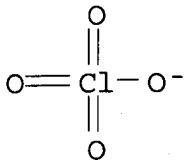
CRN 57038-57-0
CMF C41 H31 N8



*** FRAGMENT DIAGRAM IS INCOMPLETE ***

CM 2

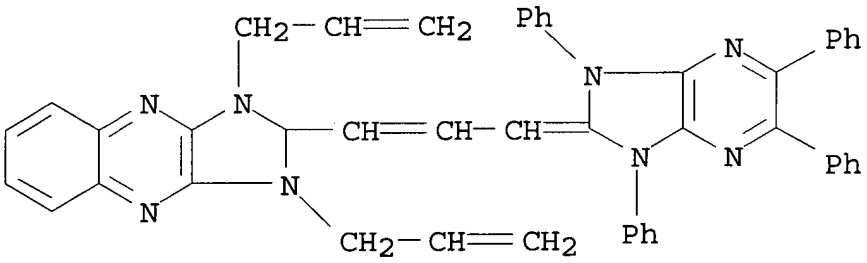
CRN 14797-73-0
CMF Cl O4



RN 57038-61-6 HCAPLUS
CN 1H-Imidazo[4,5-b]quinoxalinium, 2-[3-(1,3-dihydro-1,3,5,6-tetraphenyl-2H-imidazo[4,5-b]pyrazin-2-ylidene)-1-propenyl]-1,3-di-2-propenyl-, perchlorate (9CI) (CA INDEX NAME)

CM 1

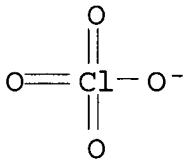
CRN 57038-60-5
CMF C47 H37 N8



*** FRAGMENT DIAGRAM IS INCOMPLETE ***

CM 2

CRN 14797-73-0
CMF Cl O4

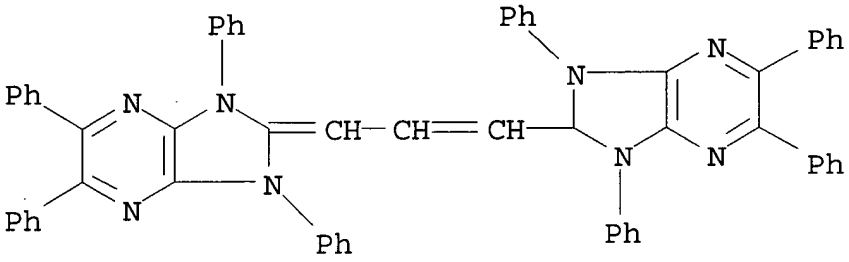


RN 57038-66-1 HCAPLUS
CN 1H-Imidazo[4,5-b]pyrazinium, 2-[3-(1,3-dihydro-1,3,5,6-tetraphenyl-2H-imidazo[4,5-b]pyrazin-2-ylidene)-1-propenyl]-1,3,5,6-tetraphenyl-, perchlorate (9CI) (CA INDEX NAME)

CM 1

CRN 57038-65-0

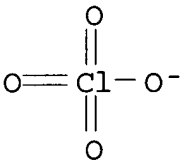
CMF C61 H43 N8



*** FRAGMENT DIAGRAM IS INCOMPLETE ***

CM 2

CRN 14797-73-0
CMF Cl O4



IC C07C471-04
NCL 260240000E
CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic Processes)
ST ethylmethylimidazopyrazinocarbocyanine dye **photog** sensitizer
IT **Photographic** sensitizers
(ethylmethylimidazopyrazinocarbocyanine dyes as)
IT **55199-35-4 57038-17-2 57038-19-4**
57038-25-2 57038-29-6 57038-37-6 57038-39-8
57038-41-2 57038-44-5 57038-45-6 57038-52-5
(**photog**. spectral sensitizer)
IT 55199-40-1P 57038-13-8P 57038-15-0P 57038-21-8P 57038-23-0P
57038-30-9P 57038-32-1P 57038-33-2P 57038-35-4P
57038-47-8P 57038-48-9P **57038-49-0P** 57038-54-7P
57038-58-1P 57038-59-2P **57038-61-6P**
57038-63-8P 57038-64-9P **57038-66-1P** 57038-67-2P
63401-43-4P
(prepn. of)

L41 ANSWER 26 OF 29 HCAPLUS COPYRIGHT 2002 ACS
1976:412277 Document No. 85:12277 Influence of dye energy levels on the spectral sensitization of silver bromoiodide and the initial optical transient response of dye bleaching: a conversion

efficiency study. Ehrlich, S. H. (Res. Lab., Eastman Kodak Co., Rochester, NY, USA). Photographic Science and Engineering, 20(1), 5-14 (English) 1976. CODEN: PSENAC. ISSN: 0031-8760.

AB Flash spectrophotometry was used to detect transient species formed during the room-temp. irradn. of cyanine dyes dispersed in gelatin films and **photog**. **Ag halide** emulsion systems. A series of spectral sensitizing dyes, varying systematically in redn. and oxidn. potential, adsorbed to a 0.05-.mu.m Ag(Br,I) (S and Au surface-treated) emulsion was examd. for the ability of the dyes to spectrally sensitize the AgBrI grains. The threshold dye energy levels, in terms of the oxidn. and redn. potentials, that limit the spectral sensitization of **photog**. processes also limit the initial transient optical absorption of the bleached ground state of the dye subsequent to irradn. The results are interpreted in terms of a charge-transfer mechanism for both electron and hole injection from the dyes into the **Ag halide** substrate. The limiting factors are the energies of the lowest vacant levels of the dyes for electron injection and of the highest filled levels of the dyes for hole injection. Direct transient conversion efficiencies for the injection of the electron into the AgBrI grain from the dye were detd. from single flash exposures and related to the relative **photog**. quantum efficiencies.

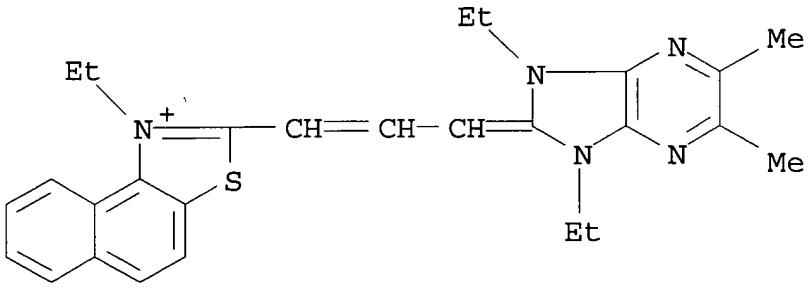
IT **55199-35-4**
(**photog**. spectral sensitization by, of silver bromoiodide grains, mechanism of)

RN 55199-35-4 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[3-(1,3-diethyl-1,3-dihydro-5,6-dimethyl-2H-imidazo[4,5-b]pyrazin-2-ylidene)-1-propenyl]-1-ethyl-, perchlorate (9CI) (CA INDEX NAME)

CM 1

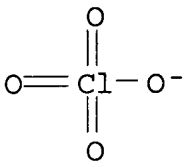
CRN 55199-34-3
CMF C27 H30 N5 S



CM 2

CRN 14797-73-0

CMF Cl O4



CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic Processes)

IT Energy level
(of cyanine dyes, **photog**. sensitization of silver bromoiodide grains in relation to)

IT **Photography**
(spectral sensitization of silver bromoiodide grains in, cyanine dye energy level effect on)

IT 905-97-5 2402-42-8 2452-74-6 2768-90-3 3028-95-3 3065-79-0
3915-61-5 4742-50-1 4742-86-3 14154-05-3 14696-39-0
18426-56-7 24402-80-0 34651-02-0 41503-72-4 47450-63-5
55199-35-4 55199-38-7 55199-42-3 55199-43-4
55199-44-5 55317-79-8 55479-14-6 55479-17-9 59452-37-8
59452-39-0 59452-41-4 59452-43-6 59472-88-7 59692-85-2
(**photog**. spectral sensitization by, of silver bromoiodide grains, mechanism of)

L41 ANSWER 27 OF 29 HCAPLUS COPYRIGHT 2002 ACS

1975:148448 Document No. 82:148448 Influence of dye energy levels on the spectrally sensitized luminescence from slver bromoiodide. Penner, Thomas L.; Gilman, P. B., Jr. (Res. Lab., Eastman Kodak Co., Rochester, NY, USA). Photographic Science and Engineering, 19(2), 102-14 (English) 1975. CODEN: PSENAC. ISSN: 0031-8760.

AB Several series of spectral sensitizing dyes, varying systematically in redn. or oxidn. potential, adsorbed to a 0.8 .mu. Ag(Br,I) emulsion, were examd. for their ability to spectrally sensitize the characteristic delayed Ag(Br,I) luminescence. The energy levels that limit the spectral sensitization of **photog**. processes also tend to limit the sensitization of the luminescence. The luminescence results are interpreted in terms of a charge-transfer mechanism for both electron and hole injection from the dyes into the **Ag halide** substrate, in which the limiting factors are the energies of the lowest vacant levels of the dyes for electron injection and the highest levels of the dyes for hole injection.

IT **55199-35-4**
(photoluminescence sensitized by, of **photographic silver halide** emulsions, **photog**. sensitization in relation to)

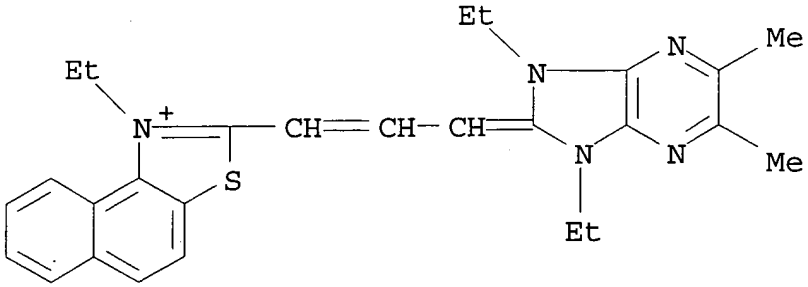
RN 55199-35-4 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 2-[3-(1,3-diethyl-1,3-dihydro-5,6-dimethyl-2H-imidazo[4,5-b]pyrazin-2-ylidene)-1-propenyl]-1-ethyl-,

perchlorate (9CI) (CA INDEX NAME)

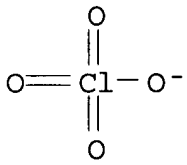
CM 1

CRN 55199-34-3
CMF C27 H30 N5 S



CM 2

CRN 14797-73-0
CMF Cl O4



CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic Processes)
ST **silver halide** luminescence dye sensitized
IT **Photographic** emulsions
(luminescence of **silver halide**, dye energy level effect on sensitized)
IT Energy level
(of dyes, **photog. silver halide** emulsion luminescence in relation to)
IT Luminescence
(photo-, of **photog. silver halide** emulsions, dye energy level effect on sensitized)
IT **Photography**
(spectral sensitization in, dye-sensitized photoluminescence in relation to)
IT 905-96-4 905-97-5 2402-42-8 2768-90-3 3028-95-3 3065-79-0
4353-57-5 4742-50-1 4742-86-3 14696-39-0 16025-99-3
18426-56-7 23779-67-1 24402-80-0 25052-61-3 26169-00-6
33006-23-4 34651-02-0 41503-72-4 47450-63-5 52762-72-8

54290-14-1 54290-15-2 54290-16-3 54350-28-6 55199-28-5
55199-30-9 55199-31-0 55199-33-2 **55199-35-4**
55199-36-5 55199-37-6 55199-38-7 55199-40-1 55199-42-3
55199-43-4 55199-44-5 55250-12-9 55317-79-8 55479-14-6
55479-17-9
(photoluminescence sensitized by, of **photographic silver halide** emulsions, **photog**. sensitization in relation to)

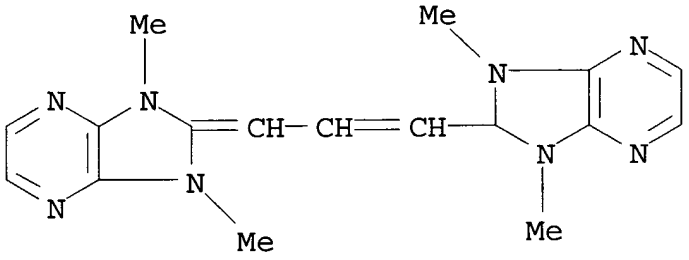
L41 ANSWER 28 OF 29 HCAPLUS COPYRIGHT 2002 ACS
1974:89512 Document No. 80:89512 Crossover studies. I. Calculated cyanine dye energy levels and sensitization of fine-grained **silver halides**. Sturmer, D.M.; Gaugh, W. S.; Bruschi, B. J. (Res. Lab., Eastman Kodak Co., Rochester, NY, USA). Photographic Science and Engineering, 18(1), 49-55 (English) 1974. CODEN: PSENAC. ISSN: 0031-8760.

AB Addnl. fused benzene rings in the heterocyclic nuclei of cyanine dyes affect the theor. energy levels more than the absorption wavelength. The energy-level changes are reflected in the **photog**. behavior of ground-state and excited-state dyes. Electron trapping by ground-state dyes provides the basis for an approx. calibration of theor. energy levels relative to vacuum. Dyes adsorbed to various surface sites are postulated to be energetically nonequiv., and the dye-surface interactions lead to a distribution of ground and excited states. Orbital diagrams employing broad distributions are suggested as more functional than standard dye energy-level diagrams.

IT **51943-67-0**
(**photog**. spectral sensitization by, energy level and)

RN 51943-67-0 HCAPLUS

CN 1H-Imidazo[4,5-b]pyrazinium, 2-[3-(1,3-dihydro-1,3-dimethyl-2H-imidazo[4,5-b]pyrazin-2-ylidene)-1-propenyl]-1,3-dimethyl- (9CI) (CA INDEX NAME)



*** FRAGMENT DIAGRAM IS INCOMPLETE ***

CC **74-2** (Radiation Chemistry, Photochemistry, and Photographic Processes)

IT **Photographic** sensitizers
(cyanine dyes, energy levels of, mol. structure in relation to)

IT **Photography**
(sensitization in, spectral, energy levels of cyanine dyes in

relation to)

IT 7187-55-5 17694-02-9 18403-49-1 37069-75-3 51943-52-3
51943-56-7 51943-59-0 51943-63-6 51943-65-8 51943-66-9
51943-67-0 51943-68-1 51943-69-2
(**photog**. spectral sensitization by, energy level and)

L41 ANSWER 29 OF 29 HCAPLUS COPYRIGHT 2002 ACS

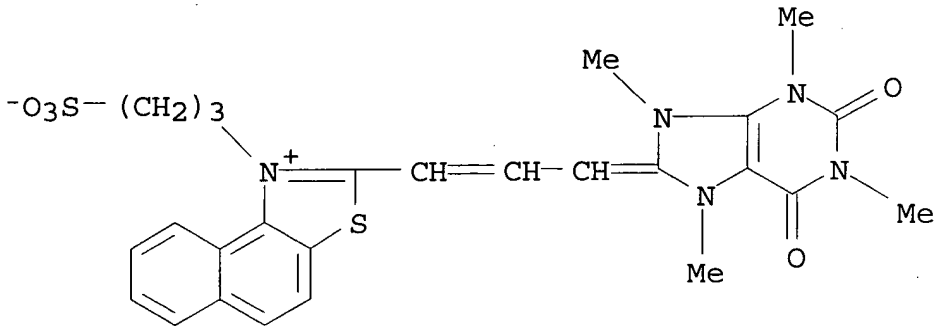
1971:48060 Document No. 74:48060 Methine dyes, sensitizers for **silver halide photographic** emulsions.
VanLare, Earl J.; Brooker, Leslie G. S. (Eastman Kodak Co.). Fr. FR 1592194 19700619, 18 pp. (French). CODEN: FRXXAK. PRIORITY: US 19671106.

AB Asym. 8,9-dihydroxanthine carbocyanines or merocyanines are used as sensitizers for gelatin **Ag halide** emulsions, and the amt. used is 10-20 mg cyanine per l. emulsion. Benzoxazole, benzothiazole, benzoselenazole, indoline, and rhodanine rings can be present in the methine dyes.

IT **31037-60-2 31037-61-3**
(**photographic** sensitizer)

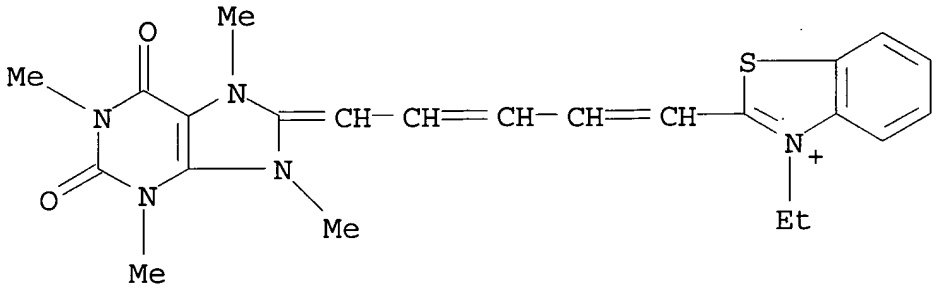
RN 31037-60-2 HCAPLUS

CN Naphtho[1,2-d]thiazolium, 1-(3-sulfopropyl)-2-[3-(2,3,6,9-tetrahydro-1,3,7,9-tetramethyl-2,6-dioxopurin-8(1H)-ylidene)propenyl]-, hydroxide, inner salt (8CI) (CA INDEX NAME)



RN 31037-61-3 HCAPLUS

CN Benzothiazolium, 3-ethyl-2-[5-(2,3,5,6-tetrahydro-1,3,7,9-tetramethyl-2,6-dioxopurin-8(1H)-ylidene)-1,3-pentadienyl]-, iodide (8CI) (CA INDEX NAME)



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IC C09B; G03C
CC **74** (Radiation Chemistry, Photochemistry, and Photographic Processes)
ST methine dyes sensitizers **photog**; sensitizers methine dyes **photog**; dyes methine sensitizers **photog**; xanthine methine dyes **photog**
IT **Photographic** sensitizers
(dihydroxanthine carbocyanine dyes as)
IT 31037-55-5 31037-56-6 31037-57-7 31037-58-8 31037-59-9
31037-60-2 31037-61-3 31037-62-4 31037-63-5
31037-64-6 31037-65-7 31037-66-8 31037-67-9 31037-68-0
31037-69-1 33072-54-7
(**photographic** sensitizer)